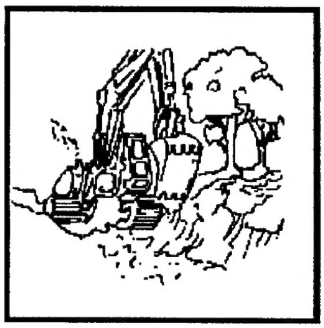

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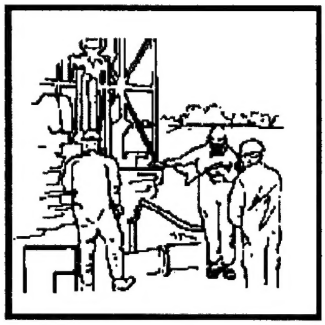

Prepared by

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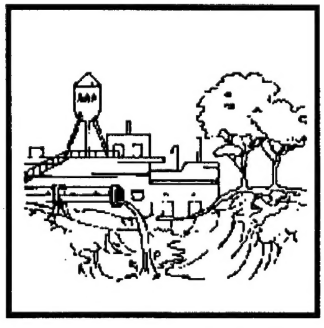

DEPARTMENT OF THE ARMY
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REPLY TO
ATTENTION OF

24 FEB 1994

SFIM-AEC-IRP (50-6c)

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Installation Restoration Program (IRP) Guidance Manual

1. Reference, memorandum, USAEC, ENAEC-IR-P, 25 May 93, subject: 1993 Defense Environmental Restoration Program (DERP) Workshop.

2. The updated subject document is enclosed for your retention and use in the planning, programming, and execution of the Army's IRP. Based on responses received from the referenced Army-wide staffing, the document has been revised to accommodate a majority of those comments.

3. Because of the complexity and evolutionary nature of the IRP, it was difficult to address the various aspects of the IRP to the level of detail that may be required in all instances. However, I believe that the enclosed manual provides a comprehensive "road map" which will enable environmental restoration personnel to successfully manage the Army's IRP. To that end, please ensure that the enclosed receives the widest dissemination.

4. To request additional copies of the manual, you may contact the U.S. Army Environmental Center Technical Information Center at (410) 679-3338.

5. Should you have specific questions or comments regarding the content of the manual, please contact Mrs. Janet Beavers at commercial (410) 671-1515/2270 or DSN 584-1515/2270.

Encl

DANIEL F. UYESUGI
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The Installation Restoration Program Guidance Manual was prepared by USAEC to provide guidance to the Installation Commander and his/her staff on implementing the Installation Restoration Program. The manual includes site identification, site nomination for funding, concurrent requirements, preparation of contract statements of work, and contract administration. It is not intended to replace or modify existing Army regulations or Headquarters Department of the Army directives but to supplement the requirements set forth in these documents.

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U.S. ARMY
INSTALLATION
RESTORATION PROGRAM
GUIDANCE MANUAL

FOREWORD

INSTALLATION RESTORATION PROGRAM GUIDANCE MANUAL

A major part of the Army's long-term effort to meet our environmental responsibilities is the Installation Restoration Program (IRP). Key to the success of this program is the installation commander. Commanders shoulder the responsibility for ensuring the health and safety of military and civilian personnel on the installation, as well as ensuring that on post activities do not impact the health and safety of the surrounding community. This guidance was developed to assist Commanders and their staffs by providing basic guidance and procedures required to implement an efficient, rapid, cost-effective, and successful environmental restoration program.

This document provides updated program guidance and procedures in the face of rapidly changing and increasingly complex conditions. Over the past several years, the Army environmental community, based on significant feedback from participating installations, has focused on clarifying and simplifying guidance and procedures associated with implementing the IRP. I believe this guidance will be a significant management tool for conducting environmental restoration at all active CONUS Army installations.

I cannot overstate the importance of your role in the Army's environmental stewardship as we prepare to enter the 21st century. I encourage your use and widespread dissemination of the information in this document to help us meet this challenge.

GERALD C. BROWN
Brigadier General, U.S. Army
Director, Environmental Programs

EXECUTIVE SUMMARY

This U.S. Army Installation Restoration Program (IRP) guidance manual addresses both the requirements of the laws, regulations, policies and procedures concerning the IRP and the issues involved in IRP implementation at the site, installation, Major Command (MACOM) and Headquarters, Department of Army (HQDA) levels. This manual presents a framework within which managers are expected to use well-informed judgement to provide effective, timely and budget-conscious responses to the requirements of the program. In addition to incorporating program changes since the first edition of the manual in 1990, emphasis is placed in this second edition on site closure, local initiative and the use of alternative technologies in site remediation.

The IRP is a component of the Defense Environmental Restoration Program (DERP) as codified into law as 10 USC Chapter 160. The IRP is distinct from, but must be consistent with the requirements, policies and procedures of the CERCLA (The Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, commonly known as Superfund) and its implementing regulations, the National Contingency Plan (NCP).

The Army has long handled toxic and hazardous materials within its operations. These materials, if released into the environment could harm human, animal or plant life, or damage water supplies and other natural resources. To address the potential dangers posed by sites created by the past handling or disposal of hazardous materials, the Department of Defense (DoD) initiated the IRP in 1975. The IRP establishes a structured program for identification, investigation, cleanup and closure of these past disposal sites. Each military service conducts its own IRP, but for the purposes of this manual the term IRP denotes the Army program.

Key responsibilities for IRP implementation are delegated:

- to the Army Environmental Center (USAEC) for program oversight and guidance,
- to MACOMs for response action implementation at installations within their command,
- to Installation Commanders in their role as real property and activity managers, and
- to Remedial Project Managers (RPM) for oversight of individual sites through the IRP process

Proper execution of these responsibilities demand that RPMs are properly trained and equipped with the necessary resources to oversee a complex, well-coordinated interdisciplinary response for resolution of the problems posed by each of their IRP sites. Scientific and engineering approaches to site technical problems must be supported by substantial efforts to: (i) protect the health and safety of site workers, (ii) involve Federal and State regulatory agencies as well as the public in the process, (iii) satisfy reporting and documentation requirements, and (iv) meet the planning, scheduling, budgeting and execution challenges of this potentially costly, long-term program.

The Army's objectives in implementing the IRP are to be fully responsive to the legal requirements which drive the IRP, and to strongly and actively address the underlying risks posed by these sites. In this way, the Army is acting as both a good neighbor and as a protector of the public and the nation's environment and natural resources.

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ABBREVIATIONS AND ACRONYMS

ACSIM	U.S. Army Assistant Chief of Staff, Installation Management
ADARS	U.S. Army Defense Acquisition Regulation Supplement
ADEEBBS	U.S. Army Defense Environmental Electronic Bulletin Board System
A/E	Architectural/Engineering
AEO	U.S. Army Environmental Office [*now* ODEP]
AFARS	Army Federal Acquisition Regulations Supplement
AFP	Approved Annual Funding Program
AMC	U.S. Army Materiel Command
AMEDD	U.S. Army Medical Department
AR	U.S. Army Regulation
ARAR	Applicable or Relevant and Appropriate Requirement
ASAFM	Assistant Secretary of the Army, Financial Management
ASTM	American Society for Testing and Materials
ATSDR	Agency for Toxic Substances and Disease Registry
BD/DR	Building Demolition and Debris Removal
BPRR	Budget Program and Resources Review
BRAC	Base Realignment and Closure
BY+5	Budget Year Plus 5 Years - Workplan Forecast
CA	Cooperative Agreement
CDR	Commander
CEQ	Council on Environmental Quality [*no longer in existence*]
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System
CFR	Code of Federal Regulations
CONUS	Continental United States
COR	Contracting Officer's Representative
COTR	Contracting Officer's Technical Representative
CPAF	Cost Plus Award Fee
CPFF	Cost Plus Fixed Fee
CPIF	Cost Plus Incentive Fee
CRA	Continuing Resolution Authority
CRP	Community Relations Plan
CY	Calendar Year
DA	Department of the Army
DASA(ESOH)	Deputy Assistant Secretary of the Army, Environment, Safety and Occupational Health
DEP	Director of Environmental Programs

ABBREVIATIONS AND ACRONYMS
(Continued)

DASD(E)	Deputy Assistant Secretary of Defense (Environment) [*now* DUSD(ES)]
DD	Decision Document
DECIM	Defense Environmental Corporate Information Management
DENIX	Defense Environmental Network & Information eXchange
DEEBBS	Defense Environmental Electronic Bulletin Board System
DERA	Defense Environmental Restoration Account
DERP	Defense Environmental Restoration Program
DERPMIS	Defense Environmental Restoration Program Management Information System [*now* RMIS]
DoD	Department of Defense
DPM	Defense Priority Model
DPS	Defense Prioritization System
DQO	Data Quality Objective
DSMOA	Defense and State Memorandum of Agreement
DUSD(ES)	Deputy Under Secretary of Defense, Environmental Security [*formerly* DASD(E)]
EA	Environmental Assessment
EBST	Environmental Baseline Survey for Transfer
ECAP	Environmental Compliance Assessment Program
EE/CA	Engineering Evaluation/Cost Analysis
EIS	Environmental Impact Statement
EO	Environmental Office
EOD	Explosive Ordnance Disposal
EPA	Environmental Protection Agency [*referred to in this manual as* USEPA]
ERP	Environmental Restoration Program
FAR	Federal Acquisition Regulation
FFA	Federal Facility Agreement
FFCA	Federal Facility Compliance Act
FFP	Firm Fixed Price
FOA	Field Operating Activity
FOSL	Finding of Suitability to Lease
FOST	Finding of Suitability to Transfer
FPI	Fixed Price Incentive
FR	Federal Register
FS	Feasibility Study
FSP	Field Sampling Plan
FUDS	Formerly Used Defense Site
FY	Fiscal Year

ABBREVIATIONS AND ACRONYMS
(Continued)

GAO	General Accounting Office
GOCO	Government Owned, Contractor Operated
HAZMIN	Hazardous Waste Minimization
HQ	Headquarters
HQDA	Headquarters, Department of the Army
HRS2	Revised Hazard Ranking System
HS	Hazardous Substance
HW	Hazardous Waste
IAG	Interagency Agreement
IAP	Installation Action Plan
IC	Installation Commander
IGCE	Independent Government Cost Estimate
IIA	Initial Installation Assessment
IPR	In-Progress Review
IRDMIS	Installation Restoration Data Management Information System
IRP	Installation Restoration Program [*used here to refer to the U.S. Army IRP, though IRPs exist for each military service*]
ISCP	Installation Spill Contingency Plan
ITARMS	Integrated Technical and Resource Management System
KO	Contracting Officer
LOE	Level of Effort
MACOM	Major Army Command
MCA	Military Construction Authorization
MILCON	Military Construction
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
NCP	National Oil and Hazardous Substances Pollution Contingency Plan [*commonly known as the* National Contingency Plan]
NEPA	National Environmental Policy Act
NGB	National Guard Bureau
NIOSH	National Institute for Occupational Safety and Health
NOV	Notice of Violation
NPL	National Priorities List
ODASD(E)	Office of the Deputy Assistant Secretary of Defense (Environment) [*now* ODUSD(ES)]

ABBREVIATIONS AND ACRONYMS
(Continued)

ODEP	Office of the Director of Environmental Programs [*formerly* **AEO**]
ODUSD(ES)	Office of the Deputy Under Secretary of Defense, Environmental Security [*formerly* ODASD(E)]
O&M	Operation and Maintenance
OMB	Office of Management and Budget
OSC	On-Scene Coordinator
OSHA	Occupational Safety and Health Administration
OSWER	USEPA Office of Solid Waste and Emergency Response
OTSG	Office of the Surgeon General
OU	Operable Unit
PA	Preliminary Assessment
PA/SI	Preliminary Assessment/Site Inspection
PMRMA	Program Manager for Rocky Mountain Arsenal
PO	Project Officer
PR	Procurement Request
PRON	Procurement Request Order Number
PRP	Potentially Responsible Party
QA	Quality Assurance
QAPP	Quality Assurance Program Plan
QC	Quality Control
RA	Remedial Action
RAB	Restoration Advisory Board
RAOP	Remedial Action Operation
RCRA	Resource Conservation and Recovery Act
RCS	Reports Control Symbol
RD	Remedial Design
R&D	Research and Development
RD&D	Research, Development and Demonstration
RDTE	Research, Development, Testing and Evaluation
RFP	Request for Proposal
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
RMIS	Restoration Management Information System
ROA	Report of Availability
ROD	Record of Decision
ROE	Report of Excess
RPM	Remedial Project Manager

ABBREVIATIONS AND ACRONYMS
(Continued)

SAP	Sampling and Analysis Plan
SARA	Superfund Amendments and Reauthorization Act
SC	Site Closeout
SI	Site Inspection
SOW	Statement of Work
SPCC Plan	Spill Prevention, Control and Countermeasures Plan
SSI	Site Screening Inspection
SWDA	Solid Waste Disposal Act
SWMU	Solid Waste Management Unit
TBCR	To Be Considered Requirement
TJAG	The Judge Advocate General
TRC	Technical Review Committee
TSD	Treatment, Storage or Disposal
USACE	U.S. Army Corps of Engineers
USACERL	U.S. Army Construction Engineering Research Laboratory
USAEC	U.S. Army Environmental Center [*formerly U.S. Army Toxic and Hazardous Materials Agency (USATHAMA)*]
USAEHA	U.S. Army Environmental Hygiene Agency
USATHAMA	U.S. Army Toxic and Hazardous Materials Agency [*now* USAEC]
USC	U.S. Code
USCG	U.S. Coast Guard
USEPA	U.S. Environmental Protection Agency
UST	Underground Storage Tank
UXO	Unexploded Ordnance

CHAPTER 1
PURPOSE AND SCOPE OF THE INSTALLATION RESTORATION PROGRAM

1.1 PURPOSE

The Army's Installation Restoration Program (IRP) is a highly visible and resource intensive element of the Army's total environmental program within the United States and its territories and possessions. The IRP is authorized by the Defense Environmental Restoration Program (DERP, codified in 10 USC Chapter § 2701-2708 and 2810) and is implemented subject to and in a manner consistent with CERCLA (The Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986) and CERCLA's implementing regulation, the "National Oil and Hazardous Substances Pollution Contingency Plan" (NCP, codified in 40 CFR 300).

The IRP provides a structured but flexible approach for identifying, evaluating, and cleaning up sites for which the Army is responsible where hazardous substances have been released to the environment. A series of defined steps, referred to as the "remedial action process," is the backbone of this structured approach. These steps may lead to one or more categories of response (removals, interim remedial actions, or final remedial actions) or they may demonstrate that no additional action is justified.

Goals for cleanup are determined on a site-by-site basis. All applicable or relevant and appropriate requirements (ARARs) of Federal and State laws are considered in establishing these goals and in selecting the best methods for cleanup.

The IRP is carried out in cooperation with the U.S. Environmental Protection Agency (USEPA) and state regulatory agencies. The public is encouraged to comment on the facts and participate in the Army's decision making process for successfully completing the IRP for individual installations and sites.

This guidance document (hereafter referred to as the "Guidance") was developed to aid Army personnel in meeting the challenge of identifying individual sites, initiating the proper remediation or cleanup action, and satisfying regulatory agencies by providing a uniform description of IRP options and requirements. Additional sources of information are referenced throughout the Guidance.

1.2 THE INSTALLATION RESTORATION PROGRAM, THE DEFENSE ENVIRONMENTAL RESTORATION PROGRAM, AND SUPERFUND

The Army IRP was established in 1975 in response to requirements at several installations where past disposal practices had caused contamination of streams and groundwater.

Executive Order 12088, "Federal Compliance with Pollution Control Standards," was issued in 1978 and is still in effect. This Executive Order requires Federal activities to comply with Federal environmental legislation. At the time, the primary Federal legislation dealing with hazardous waste disposal was the Resource Conservation and Recovery Act (RCRA), passed in 1976. Until it was amended in 1984, RCRA dealt only with current and future hazardous waste management and disposal practices in accordance with the amended Solid Waste Disposal Act (SWDA) of 1980. It did not require cleanup of past disposal sites.

The first Federal legislation to require cleanup of past hazardous waste disposal sites was CERCLA. CERCLA was enacted in 1980 and was implemented by Federal regulations in December 1982 with the expansion of the NCP (40 CFR 300) and included response procedures for releases of hazardous substances to the environment. Executive Order 12580, signed 23 January 1987, delegated to departments and agencies within the Executive Branch specific Superfund implementation responsibilities which had previously been assigned to the President in CERCLA.

The Defense Appropriation Act of 1984, as passed by Congress, established a transfer account, the Defense Environmental Restoration Account (DERA), to fund the IRP for DoD installations within the Continental United States (CONUS). It also funds the removal of structures or debris which are unsafe or constitute a hazard, cleanup of properties formerly owned or used by DoD.

Congress amended RCRA in 1984. Among other changes, Sections 3004(u) and 3004(v) mandated cleanup of past disposal sites located at facilities for which a RCRA Part B permit is required. Since most major Army installations generate and store hazardous wastes that require Part B permits, RCRA "corrective action" provisions may apply to many IRP sites. The IRP is consistent with the purposes of RCRA "corrective actions." However, RCRA is administered by the USEPA and the States through procedures and jurisdictions that differ from both the NCP and the IRP.

Some of the distinctions between RCRA, CERCLA, and the IRP were resolved by the 1986 Superfund Amendments and Reauthorization Act (SARA). Throughout this Guidance, CERCLA will be used to signify CERCLA as amended by SARA. SARA continued the Superfund for non-Federal sites, but, more importantly for the IRP, it mandated the following changes for DoD and other Federal cleanup efforts:

- Established the Defense Environmental Restoration Program (DERP) that has as one of its goals "the identification, investigation, research and development, and cleanup of contamination" that is, the IRP. (Section 211)

- Continued the DERA to fund the IRP and other DERP activities. (Section 211)

- Added Section 120 to CERCLA relating to Federal facilities, and required that DERP activities be consistent with Section 120.

Even though the DERP and Federal facilities sections of SARA require close coordination with

States, some States may rely on their permitting authorities under RCRA to increase their oversight of IRP activities. Installation Commanders who undertake IRP activities should determine whether the State agency intends to exercise RCRA authority and, if needed, adjust their program accordingly.

SARA Section 120 requires that all Federal facilities "shall be subject to, and comply with, this act in the same manner and to the same extent, both procedurally and substantively, as any non-government entity." This is not interpreted to mean DERA is equivalent to Superfund or that all provisions of the National Contingency Plan (NCP) that apply to implementation of Superfund should also apply to DERP or the Army IRP. Key differences between Superfund and DERP that should be considered when applying the NCP or USEPA guidelines to IRP activities are:

- Superfund funding is intended for the "worst" hazardous wastes sites in the nation. These sites are included on the National Priorities List (NPL). USEPA administrative procedures and guidance documents reflect this emphasis. Thirty Army installations are currently listed on the NPL (involving 34 listings), and four additional sites have been proposed for listing. However, sites do not have to be on the NPL in order to be cleaned up through the IRP activities. DERP and Army IRP activities apply to all Army sites which pose a threat to public health, welfare, or the environment.

- Army IRP activities do not receive Superfund funding whether listed on the NPL or not, but instead must use DERA or other funds for implementing the IRP.

- Some Superfund sites are abandoned and most others have numerous potentially responsible parties (PRPs). Sites on active Army installations are not abandoned. The Army is usually the only responsible party for its sites. Unity of responsibility avoids the necessity of some of the administrative intricacies of Superfund activities.

- IRP activities under DERP and Section 120 are subject to administrative requirements which do not apply to Superfund sites. Examples are schedule requirements, interagency agreements (IAGs), Defense and State Memoranda of Agreement (DSMOAs), Annual Reports to Congress, and Restoration Advisory Boards (RABs, formerly Technical Review Committees).

1.3 THE NATIONAL PRIORITIES LIST AND INTERAGENCY AGREEMENTS

CERCLA Section 105, "National Contingency Plan," requires that USEPA develop a prioritized list of the nation's "worst" hazardous waste sites. This list, the NPL, includes both Federal and non-Federal sites. USEPA uses the Revised Hazard Ranking System (HRS2, as amended 14 December 1991) to identify installations for inclusion on the NPL. A facility may also be placed on the NPL if the Agency for Toxic Substances and Disease Registry (ATSDR) issues a "Public Health Advisory" against it. Federal installations on the NPL are subject to additional procedural

requirements of CERCLA Section 120, "Federal Facilities," that are not required for non-NPL sites or installations.

One of these requirements is for Interagency Agreements/Federal Facility Agreements (IAGs/FFAs). Literally interpreted, Section 120(e)(2) requires IAGs/FFAs after the conclusion of an installation's remedial investigation/feasibility study (RI/FS). However, the preceding paragraph in the law mandates consultation during the RI/FS among the Federal agency, USEPA, and appropriate State authorities; the timetable for the RI/FS is set by the USEPA and State authorities. It is DoD policy that DoD components enter into IAGs/FFAs at its NPL installations as soon as practicable after listing (DASD(E), April 1988). Provisions of the model IAG are reproduced in Appendix A.

The Judge Advocate General (TJAG) has primary responsibility for execution of IAGs/FFAs. Proposed agreements will be coordinated with Army technical and proponent command activities and will be approved and signed by the Deputy Assistant Secretary of the Army for Environment, Safety and Occupational Health (DASA(ESOH)).

Other requirements that apply to NPL installations, but not to non-NPL installations, and sections of this Guidance in which they are addressed are given below:

- Agency for Toxic Substances and Disease Registry (ATSDR) Health Assessments (see Chapter 4.8)
- Schedule requirements beyond the Preliminary Assessment/Site Inspection (PA/SI) (see Chapter 4.1)

1.4 ELIGIBILITY FOR THE DEFENSE ENVIRONMENTAL RESTORATION ACCOUNT

The DERP guidance is published periodically by the Deputy Under Secretary of Defense, Environmental Security (DUSD(ES)) and lists activities eligible for DERA funding. DoD guidance for Fiscal Year (FY) 94/95 is provided in Appendix E.

IRP activities that are eligible for DERA funding include:

- Investigations to identify, confirm, and determine the risk to human health and the environment, feasibility studies; remedial action plans and designs; and remedial actions or removals.
- Research, development and technology demonstration necessary to conduct cleanups.
- Expenses associated with cooperative multi-party cleanup plans and activities, including litigation expenses.

- Remedial actions to protect or restore (not enhance) natural resources damaged by contamination from past hazardous waste disposal activities.

- Cleanup of low-level radioactive waste sites which have been identified as IRP sites.

- Management expenses associated with the IRP. Management expenses are those overhead costs required for adequate program oversight and management, including indirect costs as defined in the Federal Acquisition Regulation (FAR), Section 31.203.

- Operation and maintenance costs for the first ten years of operation of remedial systems and monitoring systems.

- Immediate actions necessary to address health and safety concerns such as providing alternative water supplies or treatment of contaminated drinking water, when the hazard results from a release from DoD property or a Formerly Used Defense Site (FUDS).

- Studies to locate underground tanks not used since January 1984, activities to determine whether a release has occurred, and clean up of contamination.

- Response to releases from in-service tanks discovered during initial integrity testing (leak detection monitoring) per 40 CFR 280 where testing was conducted prior to the regulatory date of December 22, 1993.

- CERCLA response actions and eligible RCRA corrective actions (see items below) identified in FFA/IAGs.

- Corrective actions at solid waste management units (SWMUs) required by 3004(u), (v) and 3008(h) of RCRA.

- Other actions taken pursuant to RCRA (e.g. closures or corrective actions at regulated treatment, storage or disposal (TSD) units) at sites if they were identified in the RMIS as of September 30, 1990. All other closure or corrective actions at RCRA regulated TSD units must be funded by non-DERA appropriations.

- Studies and support for RD&D of innovative and cost-effective technologies for cleanup of hazardous waste sites, for DoD unique wastes or other techniques widely applicable to DoD.

- Support services provided by another agency in accordance with 10 USC 2701 (d).

- Fines and penalties imposed by regulatory agencies associated with IRP activities.

Activities that are not eligible for DERA funding include:

- Closing or capping sanitary landfills unrelated to a hazardous waste cleanup action.
- Construction of hazardous waste storage, transfer, treatment or disposal facilities, except when part of a IRP response action.
- Testing or repair of active underground tanks and costs of replacing leaking underground tanks.
- Cost of testing, storing, disposing or replacing PCB transformers.
- Costs of asbestos surveys, containment, removal or disposal, except where incidental to a DERP response action.
- Cost of spill prevention and containment measures for currently operating equipment and facilities.
- Cleanup costs of spills covered or required to be covered by spill prevention, control and countermeasure (SPCC) plans.
- Costs of operation, maintenance or repair to hazardous waste treatment, storage, or disposal facilities which are currently in use (i.e., regulated or permitted), except when part of a DERP response action.
- Costs of hazardous waste disposal operations, including associated management and operational costs, unless the costs result from implementation of a DERP response action.
- Overseas Environmental Restoration activities.
- State support services prior to October 17, 1986, past State costs not reasonably documented, and State services in support of non-Environmental Restoration Program funded cleanup activities or FUDS, unless approved by DUSD(ES).
- Actions (contingency response and closure) at regulated TSD units which meet standards under 40 CFR 264, and which have been issued a final operating permit under 40 CFR 270, unless the site was identified in RMIS as of September 30, 1990.
- Facility improvements to meet RCRA operating standards at TSD units.

1.5 RELATED REQUIREMENTS AND ACTIVITIES

This Guidance specifically addresses the conduct of IRP activities under CERCLA for active Army installations. Related environmental programs are implemented by the Army, some of which are also eligible for DERA funding.

1.5.1 RCRA Corrective Actions

USEPA or States may require installations to clean up hazardous waste sites in accordance with Section 3004(u) or 3008 (h) of RCRA if an installation is applying for, or has been issued, a Part B permit to store, treat, or dispose of hazardous wastes. RCRA corrective actions can be eligible for DERA funding provided:

- The contamination resulted from activities that are not associated with current waste generation;
- The corrective action meets the definition of a response action under CERCLA (i.e., actions taken in response to a release or threatened release of hazardous substances into the environment).

It should be noted that eligibility and priority are not equivalent. RCRA SWMUs may be eligible for DERA funds, but will only receive these if they are of sufficient priority within the Army Prioritization System (see Chapter 6.2.3).

Installation Commanders should be aware that RCRA Part B permits will most likely contain enforceable schedules for completion of corrective actions. Legal review of permit applications and permits by MACOM legal staff should be requested. Issues regarding DERA eligibility criteria, schedules, and availability of funds should be raised to higher headquarters.

1.5.2 Third Party Sites

In addition to the sites that were created on Army property, many privately- and municipally-owned storage, treatment, and disposal facilities received hazardous wastes either from disposal contractors hired by the Army or directly from the Army. Under CERCLA and a number of State laws, the Army may become a PRP to enforcement actions taken to recover costs of cleanups. While USEPA cannot sue the Army to recover such costs, non-Federal PRPs can. Hence, the designation as "third party" sites.

Installation Commanders should be aware that USEPA has the authority under Section 104(e) of CERCLA to request any information pertaining to past waste disposal practices that may be related to an enforcement action. States may exercise similar authority under State laws. Requests for such information will be referred without delay to higher headquarters. No actions should be taken or statements made that could be interpreted as delaying or withholding relevant

information. Also, no actions should be taken or statements made that would either acknowledge or deny responsibility prior to appropriate legal review.

1.5.3 Research, Development, and Demonstration

SARA Section 211, which established DERP, also provided for Research, Development, and Demonstration (RD&D) of:

- Means of reducing the quantities of hazardous waste generated;
- Methods of treatment, disposal, and management (including recycling and detoxifying) of hazardous waste;
- Cost-effective technologies for cleanup of hazardous substances;
- Toxicological data collection and methodology on risk of exposure to hazardous waste; and
- Testing, evaluation and field demonstration of innovative methods to control, contain, and treat hazardous substances.

Within the Army, MACOMs identify, nominate, and prioritize RD&D user requirements. Based on these requirements, the USAEC and USACE/AMC budget for, manage, and monitor RD&D projects. Installation Commanders who have requirements that may be met through the RD&D program should contact their MACOMs for guidance.

1.5.4 Building Demolition and Debris Removal (BD/DR)

BD/DR for safety and possibly heath and environmental protection purposes is a DERP goal and may be funded by DERA. Installation Commanders who have requirements that may be met through this program should contact their MACOM for guidance. BD/DR is, however, a low priority for funding.

1.5.5 Underground Storage Tanks

Underground storage tanks (USTs) are regulated under the authority of RCRA. The reporting of UST requirements in the RCS-1383 has resulted in much confusion and frustration in the past. The narrative section of the RCS-1383 project submission must make DERA eligibility unquestionable. The following UST projects may be funded by DERA:

- Studies to locate abandoned USTs not used since January 1984;
- Activities to determine whether a release has occurred from an abandoned site;

- Response to a known release at an abandoned UST site (unless the response is incidental to tank replacement and cleanup of contamination); and
- Response to releases from in-service USTs only when discovered during initial integrity testing (leak detection monitoring) per RCRA Subtitle I and where testing is conducted prior to the regulatory date of 22 Dec 1993.

DERA will not fund testing or repair of active USTs or costs to replace leaking USTs.

1.5.6 Real Property Transactions and Environmental Baseline Survey for Transfer (EBST)

Active installations can lease (i.e., outgrant) and transfer property irrespective of being on the BRAC list. While the information contained in this section is intended to address real property outgrants and/or disposal transactions for active Army installations, the procedures are very similar to those for lease or transfer of BRAC properties. For information regarding "Environmental Documentation for Property Transfer and Lease" as related to BRAC, see Appendix F.

When Army installations engage in leasing or transferring real property, an Environmental Baseline Survey for Transfer (EBST) must be prepared as part of the Report of Availability (ROA), for each outgrant (i.e., lease) or Report of Excess (ROE) for each disposal action. The overriding purposes of an EBST are to:

- Develop sufficient information to assess health and safety risks;
- Define the nature, magnitude, and extent of any environmental contamination; and
- identify potential environmental contamination liabilities associated with a real property outgrant or disposal transaction.

At a minimum, the EBST must include the following:

- Sources of information used to prepare the EBST (i.e., IRP Initial Installation Assessment documents, PA/SI reports, RI/FS status reports, land use plans and other environmental reports, Installation Master Plan, Asbestos Surveys, aerial photos, past site inspection documents, and other sources of information such as personal interviews and historical records reviews).
- Completed Transaction Screen Questionnaire (ASTM Document E1528-93, Standard Practice for Environmental Site Assessments: Transaction Screen Process). [The questionnaire can be obtained from USAEC, SFIM-AEC-IRA.]
- Map showing exact parcel identification information (including address, assessor parcel number, legal description, etc.).

- Short description of past and current activities on the site.
- Short description of the hazardous substance or waste management practices at the site.
- Trip reports from visual site inspection.
- Discussion of possible sources of contamination on adjacent property (which could migrate to the site).
- Executive Summary briefly stating the findings of the EBST and a recommendation whether or not the outgrant or disposal should proceed. Certification of survey results by the Installation Commander or his/her appropriate equivalent is required.

Based on the results of the EBST, the Army can determine whether or not the site under consideration can be leased or if it should be retained under Army control until the contamination is remediated. Although it is legally possible to outgrant contaminated Army property, it is not Army policy to do so. The Army does not dispose of contaminated real property until contamination has been remediated.

If the site is to be leased, a ROA will be prepared by the installation and must include the EBST. After this, a Finding of Suitability to Lease (FOSL) is prepared. Prior to outgranting of Army real property, the MACOM Environmental Office (EO) or a designated appropriate equivalent will review the EBST and warrant and certify in the FOSL document that the site meets the requirements of 42 U.S.C. 9620(H)(1).

If a site is to be disposed, the ROE prepared for each disposal action will include the EBST and will proceed to the preparation of a Finding of Suitability to Transfer (FOST). The FOST is prepared by the Office of the Chief of Engineers (CERE-MM/MC). Prior to disposing of Army real property, the DASA(ESOH) will review the EBST and warrant and certify in the FOST document that the requirements of 42 U.S.C. 9629(h)(3) have been met.

1.5.7 Construction Site Environmental Surveys

Environmental evaluation of Military Construction, minor Military Construction, and family housing construction projects requires consideration of potential site contamination. The proponent of a construction site environmental survey should allocate funds for the survey out of Operation and Maintenance (O&M) accounts. If sites are discovered that would be eligible for evaluation or remediation through the IRP, then they may be included in the IRP Work Plan (see Chapter 6.1.4). Construction site restoration efforts will not normally be given higher funding priority just to meet a construction schedule; rather, they will be subject to the Army prioritization system as are all IRP projects. Hazardous waste sites may also be evaluated and remediated by projects that are programmed and budgeted in the applicable construction account,

in which case the projects will still be accomplished in accordance with the NCP and AR 200-1.

1.5.8 Formerly Used Defense Sites

Hazardous waste sites located on property formerly controlled by components of the DoD at the time of release are known as Formerly Used Defense Sites (FUDS). Headquarters (HQ) USACE manages the FUDS program for the DoD. The FUDS program is funded by DERA and is implemented in accordance with CERCLA and the NCP, as is the IRP. However, this Guidance addresses only the IRP for active Army installations. Active installations receiving requests for information or investigation of potential FUDS contamination should immediately refer the request to HQ USACE. Installation commanders with adjacent FUDS work may opt to run the public involvement program for the site under the IRP should the situation warrant.

1.5.9 Base Realignment and Closure (BRAC)

Eighty-four (84) Army installations have been placed on the three current BRAC lists (BRAC 1 of 1988, BRAC 2 of 1991 and BRAC 3 of 1993). The BRAC Environmental Restoration Program (BRAC ERP) was established separate from the IRP and given the objective of completing necessary environmental restoration at those DoD installations being closed under BRAC. The Army is applying methods and protocols which are comparable to those used at IRP sites. Differences in the two programs have been made to reflect the nature of the BRAC.

Scheduling: Installations which are on a BRAC list are scheduled for closure five years from the date of that list. This limit in many cases forces a more aggressive schedule than would be seen in the IRP. Expedited response actions are therefore emphasized.

Funding: Congress established a fund, the DoD Base Closure Account, which provides multiyear funds to pay for BRAC independently of DERA. These monies can only be used to investigate and remediate existing conditions at closing installations or realigned installations which have property identified for excessing. Costs for ensuring environmental compliance of current operations are not supported out of this Base Closure Account.

Reporting of BRAC activities is included with each RCS-1383 submission. These differences are needed to reflect both the expedited nature of the BRAC and the multiyear nature of the BRAC funds.

Site Closure under BRAC reflect the requirements associated with real property transfer. The protocol agreed to in California, for instance, requires that DoD in consultation with USEPA prepare a Finding of Suitability to Transfer (FOST) document. The FOST identifies and documents parcels of land that are environmentally suitable for transfer.

BRAC-specific procedures will not be addressed further in this Guidance. Individuals involved

in BRAC must follow current BRAC policy and guidance to ensure that they are complying with all components of their program.

1.6 TERMINOLOGY

SARA Section 120, "Federal Facilities," requires that terminology used to describe or otherwise identify actions carried out under the IRP shall be substantially the same as the terminology of regulations and guidelines issued by USEPA under CERCLA authority. Therefore, this Guidance where appropriate, uses terms that are defined in CERCLA Section 101 and in the NCP. Terms of particular interest to IRP site managers are included in the Glossary of this Guidance.

Several terms require some explanation as given below:

1. **Facility** - The term "facility" as defined in Section 101(9) of CERCLA can be applied to an entire military installation; to any improvements to property such as buildings, utilities, and earth works; or to a location where hazardous substances have been released or exist. The term is used in each of these senses in various sections of CERCLA. This term is similarly ambiguous in RCRA and its implementing regulations.

For the purposes of this Guidance, the following terms will be used instead of "facility" in order to avoid this ambiguity:

> Installation - The real property owned or leased by the Army including a main base and any associated real properties identified by the same real property number.
>
> Site - A location on an installation's property where hazardous wastes have been stored, disposed of, spilled, or otherwise released to the environment. A site includes air, land, and water resources where they are contaminated by the release, and it includes any structures, earth works, or equipment that are clearly associated with the release. Where multiple sites may contribute to contamination of an aquifer or a common land area, the contaminated resource may be identified as a site that is distinguished from the sites where the releases occurred. A site is the basic unit for planning and implementing response actions. However, neither this definition nor later discussions of response action procedures should preclude planning or implementing any actions for multiple sites if that will result in efficient use of time and resources.
>
> Solid Waste Management Unit (SWMU) - Any discernible waste management unit at a RCRA-permitted installation from which hazardous waste or hazardous constituents, as defined by RCRA, might migrate. The definition does not include accidental spills that might still be regulated under CERCLA and may be remediated through the IRP. Only past releases from SWMUs that also meet the definition of a CERCLA release are eligible for remediation through the IRP.

2. **Response/Response Action** - "Response" or "response action" is broadly defined in CERCLA. Any investigation, evaluation, decision-making, design or implementation step taken for a hazardous substance release is covered by this definition. Four terms that are subcategories of "response" need to be differentiated, i.e., "removal," "remedial action," "remedial action process," and "operable unit." Procedural requirements for each of these types of action differ substantially, but their CERCLA definitions are almost as broad as the definition of "response" allowing them to be used almost interchangeably. Indeed, the terms are best defined by the procedural requirements that are imposed on them.

Removals - Time consuming and complex evaluation and decision-making steps, as seen in Remedial Investigation/Feasibility Studies, are not required for removals. There is no presumption that removals will provide permanent solutions, although they may. Any actions taken as removals should satisfy one or more of the following tests:

- Imminent Threat - The site poses an imminent threat to public health. For the purposes of the Army IRP, a threat is imminent if human exposure in excess of applicable human health criteria is predictable prior to implementation of a effective final remedial action or operable unit. [Note: Determination of an imminent or potential health threat should be supported by a designated representative of the Office of the Surgeon General (OTSG).

- Source Control - The action either removes the source of contamination off-site or effectively contains it on-site so that continuing releases are prevented or reduced.

- Access Limitation - The action substantially reduces the possibility of human exposure to hazardous substances.

A RI/FS is not required for removals, though removal site evaluations may be needed (see NCP § 300.410). Removals may be the only actions required for sites where hazardous substances have not dispersed into soil, sediments, surface waters, or groundwater. However, dispersion has occurred from many IRP sites, and therefore many site measures will not qualify for implementation as removals. Any control measures needed in addition to or instead of removals will be classified as remedial actions.

Remedial Actions and Remedial Action Process A distinction will be made in this Guidance between control measures to be implemented, which are called "remedial actions," and the identification, evaluation, decision-making, and design and construction steps required to implement them. These steps collectively are called the "remedial action process." The remedial action process may lead to remedial actions, removals, or decisions to take no further action as discussed in Chapters 3.1 through 3.3.

Operable Units (OU) - Parts of remedial actions may be implemented as operable units. The NCP defines operable unit as "a discrete action that comprise an incremental step toward comprehensively addressing site problems" (NCP § 300.5). An operable unit can be used to

distinguish geographic areas, treatment technologies, or phases of response.

The term operable unit is also used by USEPA to provide a standardized framework for measuring progress at its own sites as well as those of other responsible parties including Federal Agencies. Normally these will have been identified in the Installation IAG or Federal Facility Compliance Agreement (FFCA). Only installations with NPL sites should be concerned with reporting the number of operable units. Activities defined at this level will be monitored as separate projects and reported to the Office of Management and Budget (OMB) as separate projects.

All activities meeting the above requirements for operable units should be reported as separate projects and identified at the operable unit level. For reporting purposes, "Operable Unit" is a new three-digit field that has been added to RCS-1383 report submittals to facilitate the reporting requirements for DERA-funded cleanup sites listed on the NPL (this field should be left blank for all other projects). The amended Circular A-11 (1990) mandates additional reporting through the A-106 process at the operable unit level.

CHAPTER 2
AUTHORITIES AND RESPONSIBILITIES

2.1 DEPARTMENT OF DEFENSE

Many of the responsibilities and authorities created by CERCLA are assigned to the President. The President delegated these responsibilities and authorities to the heads of various Executive agencies and departments in Executive Order 12580 (President of the United States of America, January 29, 1987). In general, Executive Order 12580 delegated to the Secretary of Defense response authority ". . . with respect to releases or threatened releases where either the release is on or the sole source of the release is from any facility or vessel under the jurisdiction, custody, or control of . . ." DoD.

Specific authorities under CERCLA delegated by Executive Order 12580 to the Secretary of Defense include:

Authority	CERCLA Sections
• Remove or provide remedial action for releases of hazardous substances, contaminants, or pollutants	104(a), 104(i)(11), 120
• Gather information and evaluate the existence and extent of releases and resulting threats to public health and the environment, and undertake other studies necessary to plan and direct response actions (compliance orders to obtain information issues under Section 104(e)(5)(A) must be in concurrence with the Attorney General)	104(b) and (e), 120
• Select remedial actions (except as provided by NPL sites in Section 120(e)(4)(A)) of CERCLA and Section 10(a) of Executive Order 12580)	104(c)(4), 120, 121
• Establish an Administrative Record upon which to base the selection of a response action and on which judicial review of removals or remedial actions will be based; make the record available to the public and ensure the opportunity for public participation in the selection of a response action	113(k), 117(a) and (c), 120
• Act as the natural resources trustee to assess damages for, injury to, destruction of, or loss of natural resources on, over, or under land managed by DoD	107(f)

•	May agree to hold harmless and indemnify response action contractors	119, 120
•	Require compliance by response action contractors and subcontractors with Federal health and safety standards	104(f)
•	Ensure compliance with the Davis-Bacon Act regarding wages paid by response action contractors and subcontractors to laborers and mechanics	104(g)
•	May, subject to the approval of the Administrator of the Office of Federal Procurement Policy, promulgate regulations for and authorize the use of emergency procurement powers to effect the purposes of CERCLA	104(h)
•	Consider the availability of qualified minority firms in awarding contracts under CERCLA and provide to the Administrator of USEPA any requested information on minority contracting for its Section 105(f) report to Congress	105(f)
•	For facilities in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS), complete preliminary assessments by January 1, 1988, and indicated site inspections by January 1, 1989	116(a)
•	Conduct a preliminary assessment of releases upon petition by any person who is or may be affected by the release	105(d)
•	May, with the concurrence of the Attorney General, enter into and enforce consent orders with non-Federal PRPs for remediation of releases at DoD facilities not listed on the NPL	109(a)(1)(D) and (E), 122, 120(e)(6)
•	Notify potentially injured parties who may have been harmed by releases from DoD facilities and promulgate rules and regulations for providing such notice	111(g)

The Secretary's authorities and responsibilities are implemented by the DERP discussed in Chapter I, Section B. SARA, Section 211, requires that the Secretary identify an office within

the Office of the Secretary to carry out the program. The Secretary has designated the Office of the Deputy Under Secretary of Defense, Environmental Security (ODUSD(ES)) for this purpose and designated that ODUSD(ES):

- Has overall responsibility for carrying out the DERP and managing the DERA;
- Provides policy and guidance to the DoD components for implementing DERP, including establishing sub-elements and priorities;
- Provides oversight of DERP, including consistent program implementation across DoD components, conducting In-Progress Reviews (IPRs) of program execution, and establishing a DoD-wide management information system (RMIS, formerly DERPMIS) containing site-specific data;
- Provides liaison to other Federal agencies and Congress, including preparing annual reports to Congress; and
- Negotiates Defense and State Memorandum of Agreement (DSMOA).

2.2 DEPARTMENT OF THE ARMY

The Department of the Army (DA) implements its IRP element of DERP in accordance with CERCLA, the NCP, Section 211 of SARA, ODUSD(ES) policy and guidance, and AR 200-1.

The Army organization for implementing the IRP for active Army installations includes the following individuals and offices:

- Deputy Assistant Secretary of the Army for Environment, Safety and Occupational Health (DASA(ESOH)) - establishes Army policy for implementation of the IRP;
- Assistant Chief of Staff for Installation Management (ACSIM) -- centralized responsibility for policy pertaining to planning, programming, execution, and operation of Army installations; primary Army Staff agency responsible for directing, coordinating, and executing Total Army environmental programs;
- Director of Environmental Programs (DEP) -- implements Army policy for conduct of the IRP;
- Office of the Director of Environmental Programs (ODEP) -- supports the DEP;
- U.S. Army Environmental Center (USAEC) -- the DA Field Operating Activity subordinate to DEP and responsible for central management of the program, coordination of IRP activities, development and execution of the IRP Work Plan, prioritization of projects in the Work Plan, execution of selected site identification

and evaluation projects, and execution of special projects and studies to ensure the responsiveness, efficiency and continuity of the IRP;

- MACOMs -- coordinate and review IRP projects for installations in the Command, and consolidate and transmit budget priorities, requests and progress reports from their installations to USAEC;

- Installation Commanders -- are responsible for IRP projects and activities affecting their installation as discussed in the next section.

- USACE Divisions/Districts -- provide local execution of selected site identification and evaluation projects (SI/RI/FS), and design and implementation steps for remedial actions and removals;

2.3. THE INSTALLATION COMMANDER'S RESPONSIBILITIES IN THE IRP

Installation Commanders are responsible for all activities regarding properties under their command. The IRP may affect the mission of an installation, the health and welfare of the people who work and live on or near an installation, and the public's attitude in neighboring communities toward an installation. Installation Commanders are, therefore, responsible for IRP decisions and activities. Installation Commanders are responsible for all activities and tenants regarding property management issues.

The scope of an Installation Commander's involvement in implementing IRP site activities will depend in part on decisions to implement activities for specific sites. These decisions are driven by resource availability, funding priority, and the inherent technical and regulatory complexity of site remediation.

The Installation Commander should:

- Ensure that IRP activities are in compliance with applicable regulations;

- Identify resources needed for compliance and execution of the IRP;

- Report discovered releases first to the MACOM, then to appropriate regulatory agencies;

- Approve decisions to implement removals, operable units, and remedial actions in coordination with the MACOM, ODEP and, for NPL sites, the DASA(ESOH), USEPA, and the appropriate State regulatory authority;

- Approve any recommended RD&D activities proposed prior to initiation;

- Approve decisions for site closeout in coordination with the MACOM;

- Submit notifications, reports, and Decision Documents (DDs) to regulatory agencies and the public;

- Participate in negotiations with regulatory agencies regarding any IRP activities or decisions that may affect the mission of the installation;

- Establish a Technical Review Committee (TRC) or Restoration Advisory Board (RAB), as appropriate, to review and comment on IRP actions and proposed actions, and designate a chairperson;

- Approve and implement a Community Relations Plan (CRP) to involve the public in IRP activities;

- Develop an Administrative Record;

- Provide support for activities on the installation such as access to sites, equipment, storage facilities, security, utilities, emergency response, communications and field offices, as appropriate;

- Program for and implement operation, maintenance or monitoring activities that may be required after a response action to ensure its continued effectiveness;

- Designate a Remedial Project Manager (RPM) to conduct IRP activities in accordance with CERCLA, the NCP, DoD guidance, and this Guidance;

- Include the installation's IRP requirements in the installation's RCS-1383 Report with input from USAEC or USACE Division/District as appropriate;

- Report IRP activities in the RMIS with input from USAEC or USACE Division/ Districts;

- Submit an Installation Action Plan (IAP) to USAEC in February of each year;

- Coordinate through command channels for technical, procedural, policy, and funding advice and support;

- Submit technical plans, Statements of Work, Health and Safety Plans, contract specifications, deliverables (e.g., remediation documentation), and DDs to USAEC for review to ensure consistency with Army IRP policies and objectives and compliance with applicable legal requirements; and

- Submit to USAEC, not later than 15 August each year, a month-by-month funds obligation plan for RCS-1383 Report Projects which are in the approved IRP Workplan.

2.4 THE REMEDIAL PROJECT MANAGER'S ROLE

An individual, known as the Remedial Project Manager (RPM), will be designated for each IRP site requiring or potentially requiring a response action under the authority of CERCLA. The RPM is normally the installation's environmental coordinator.

The RPM is the prime contact for response actions at assigned IRP sites. The RPM identifies the resources needed to effectively implement the remedial action process and CERCLA response actions. The RPM coordinates the work of installation staff, Army technical support agencies, and contractors in the accomplishment of IRP goals and policies.

In order to carry out these responsibilities, the RPM should, as a minimum:

- Understand and fulfill his or her role as the principle representative of the lead agency for remediation of releases;
- Maintain a relationship with the Installation Commander that facilitates communication and that recognizes the Commander's responsibilities for installation property, personnel, and missions;
- Understand the DSMOA and its implications for IRP response actions;
- Maintain relationships with designated representatives of regulatory agencies that facilitate communication and that recognize their legitimate environmental and public health interests;
- Remain informed of technical requirements, actions, and findings for sites at installations for which he or she is responsible, and be prepared to make rational decisions as the need arises;
- For sites or installations included on the NPL, maintain a written schedule of milestones and commitments in the Record of Decision (ROD) and IAGs, and provide updates to the USAEC project officer and MACOM;
- Ensure that the scope and level of effort of response actions are appropriate for the nature of the environmental and public health threats to be remedied;
- Be thoroughly familiar with this Guidance, the NCP and State laws and regulations that may govern selection or implementation of response actions;
- Achieve sufficient knowledge of environmental, health and safety, engineering, public affairs and administrative disciplines necessary to coordinate the IRP at the installation;

- Contact designated or alternate contracting offices to determine their capacity to support expected contract actions and to identify specific contracting office requirements;

- Review and have available the Installation Spill Contingency Plan (ISCP) and establish contact with the Plan's On-Scene Coordinator (OSC) in the event emergency response support is required;

- Review any RD&D activities prior to request for approval;

- Review with the Installation Commander whether resources are available within the installation, via the Army or other Federal agencies, or via private sector contracts to meet the response action requirements at the site; and

- In cases where IRP response action contractors are being used, work with the Contracting Officer (KO) to ensure that the work is properly executed.

CHAPTER 3
IRP RESPONSE ACTIONS

3.1 INTRODUCTION

This chapter summarizes the primary activities that are typically performed to implement response actions. Justifications for including a site in the IRP, for implementing alternative or interim actions, and for site closeout from the IRP are also addressed.

The actual sequence and scope of activities must be tailored to site conditions and DERA funding priorities. Some guidelines that will help increase the usefulness of this guidance are listed below:

- Activities are described here as if a single site is being cleaned up. However, multiple sites grouped according to site type, potential for a common remedy, proximity, contamination of a common resource, or funding priority can be evaluated or remedied together.

- Some activities (Site Characterization is a good example) may have to be performed in steps or repeated in order to achieve their purpose.

- Considerable activity has already occurred for many Army IRP sites. While all of the procedural requirements of SARA and the revised NCP may not have been complied with, the results of past activities should be built upon and augmented, not abandoned. Augmentation is not addressed here, but should be considered in complying with procedural and substantive objectives in future activities for a site.

- DERA funding priorities may influence how many sites can be addressed together and in what time frame.

These and other factors may have to be considered in planning response actions for sites, installations, MACOMs, and active installations.

3.2 RESPONSE ACTION ALTERNATIVES

Four primary response action alternatives may be used individually or in combination at a site:

- **remedial action process** is the primary alternative for most IRP sites. It provides a full, careful progression through the four phases of identification, investigation, cleanup and closeout as shown in Figure 3.1. The remedial action process is described by phase in Sections 3.3 through 3.7. Operable units may be used within the remedial action process to allow actions to be taken on a site in a progressive, incremental approach to address problems. Operable units are described in Section 3.8.

- **removal actions** are normally intended to quickly control or remove the source of a release, limit exposure of humans to a release, or respond to an imminent threat. Though preferable, it is not necessary that removals either fully address the problems posed by a site or provide solutions that are fully complementary to other remedial actions at the site. Removal actions are described in Section 3.9.

- **monitoring** is used to track the presence, migration or threat posed by contaminants at a site. Monitoring may be used at a site between response actions or when no other response action is appropriate until information or site status changes. Monitoring Actions are described in Section 3.10.

- **site closeout** involves the procedures necessary to complete actions at a site once investigation and cleanup of a site are complete. Site closeouts are initiated when a decision to take no further action is made. Site closeouts are completed when all regulatory agency concurrences are gained, all reporting and document handling requirements are met, and NPL delisting (when applicable) has occurred.

The use of one response action alternative does not limit the use of another alternative. Figure 3.2 shows some of the potential interrelationships of response action alternatives.

3.3 REMEDIAL ACTION PROCESS

The phases and steps of the remedial action process and the sequence in which they are normally undertaken are illustrated in Figure 3-1. Traditionally the remedial action process is broken down into three phases denoted by either their objective or their steps:

- **Identification** or **PA/SI** (Preliminary Assessment/Site Inspection; discussed in Section 3.4) includes the steps of discovering, assessing, and reporting on a potential new IRP site.

- **Investigation** or **RI/FS** (Remedial Investigation/Feasibility Study; discussed in Section 3.5) includes the steps for (i) analyzing in detail the nature of the site, contaminants and potential receptors, (ii) determining the regulatory requirements and cleanup objectives to be applied to the site, and (iii) identifying, analyzing and selecting remedial action approach for cleaning up the site.

- **Cleanup** or **RD/RA** (Remedial Design/Remedial Action; discussed in Section 3.6) includes the detailed engineering design step for a selected remedial action, the implementation of that remedial action, and any ongoing post-construction activities necessary to fully meet the cleanup objectives

- **Site Closeout** or **SC** is both the fourth phase and fourteenth step of the remedial action process.

FIGURE 3-1: REMEDIAL ACTION PROCESS

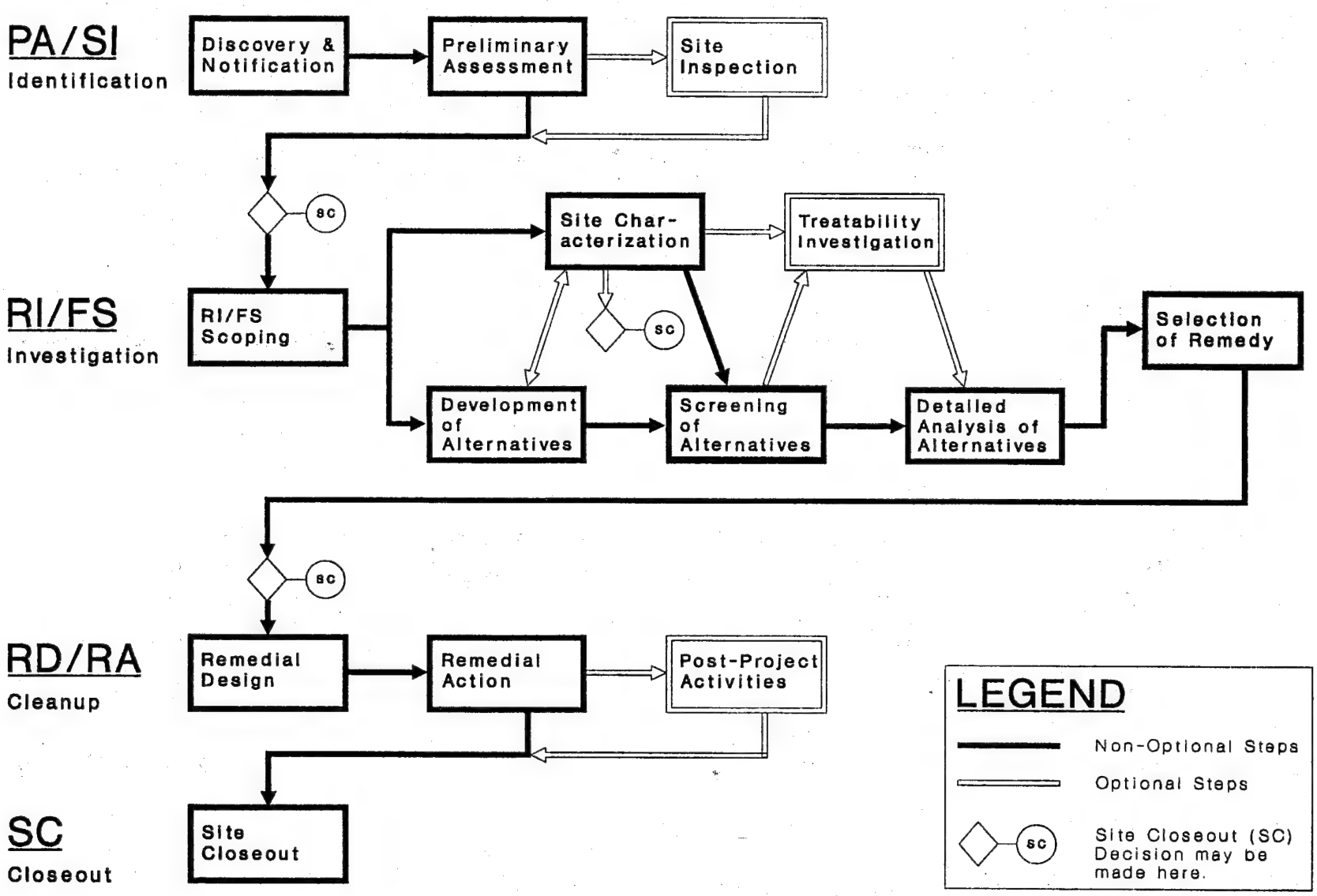
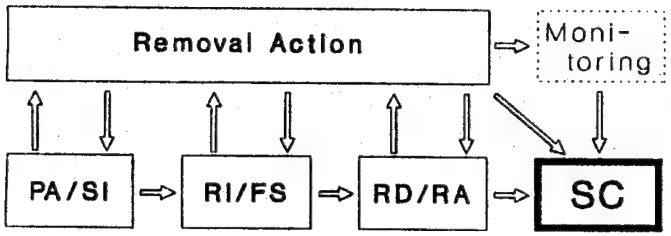
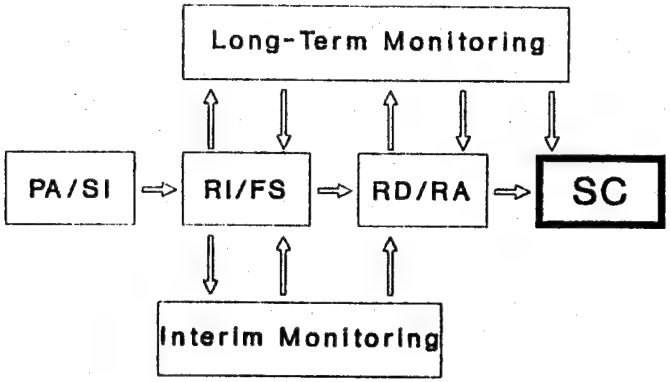


FIGURE 3-2: RESPONSE ACTION ALTERNATIVES Showing Relationship to Remedial Action Process

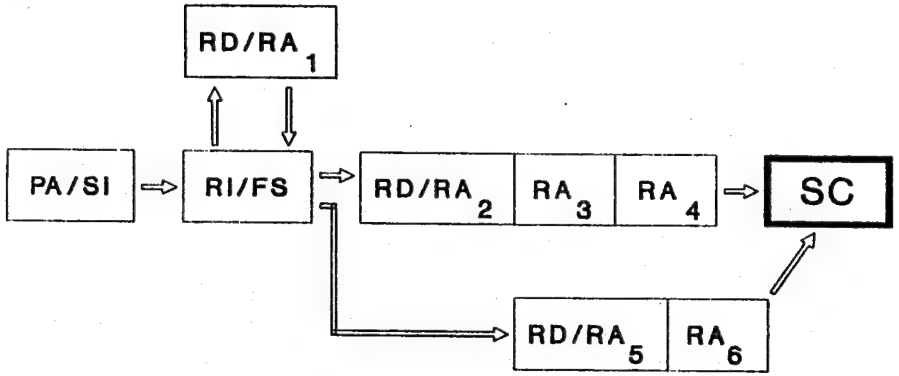
Removals



Monitoring



Operable Units



NOTES:

(1) Site Closeout (SC) must ultimately be achieved by whichever alternative pathway is selected.

(2) After completion, each response action alternative may lead back to remedial action alternative, to monitoring, or to site closeout.

(3) Pathways show some of the options for implementing a response action alternative. This is not a complete set of alternative pathways and none of the pathways shown must necessarily be followed so long as Site Closeout is obtained.

3.4 IDENTIFICATION PHASE (PA/SI)

The Identification Phase includes the three steps of Discovery and Notification, Preliminary Assessment (PA) and Site Inspection (SI). Potential IRP sites may be identified by a variety of means. Once identified they should go through a formal rating process conducted during the PA step or, if necessary, the SI step.

3.4.1 Discovery and Notification

IRP sites have been discovered by records searches and during normal installation maintenance and construction activities. Records searches, called Initial Installation Assessments (IIAs), have been conducted for Army installations that historically handled hazardous materials and which appeared on the initial Federal Agency Hazardous Waste Compliance Docket (often simply referred to as the Docket, see Chapter 7.5) . Most IRP sites discovered to date were identified during the IIAs. Although almost all Army installations have been assessed, a number of Reserve and National Guard sites may yet need to be assessed.

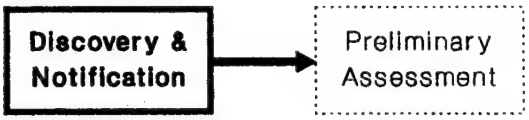
CERCLA requires that hazardous waste sites on Federal properties be reported to USEPA for inclusion in the Federal Agency Hazardous Waste Compliance Docket. The Installation Spill Contingency Plan (ISCP) and the installation's RCRA Part B permits may specify additional notification and coordination actions for newly-created and newly-discovered sites.

Newly-created sites, i.e., those resulting from ongoing operations, should be responded to by installation personnel in accordance with the ISCP including specified notification and coordination actions. Information appropriate for inclusion in the Federal Agency Hazardous Waste Compliance Docket should be transmitted through the chain of command to the appropriate USEPA regional office. Newly-created sites are not eligible for DERA funds. They should be managed by the installation and its MACOM in accordance with their RCRA permit, if applicable, or in accordance with CERCLA and this Guidance using O&M funds.

In the course of normal construction activities, Remedial Investigations (RIs), and remedial actions, sites may be discovered which have existed for some time. Generally, such pre-existing, newly discovered sites will be included in the IRP and be eligible for DERA funds. Response may be in accordance with the ISCP if the newly discovered site poses an immediate threat. For all newly discovered, pre-existing sites, information appropriate for inclusion in the Federal Agency Hazardous Waste Compliance Docket should be transmitted through the chain of command to the appropriate USEPA regional office and to HQDA(DAIM-ED).

Figure 3-3 summarizes elements of the discovery and notification step.

Figure 3-3: Elements of the Discovery and Notification Step
(for pre-existing sites)



Purposes:	• Characterize release from available information; • Report releases in excess of reportable quantity to the National Response Center, Governor of the State, USEPA Region.
Potential Subsequent Actions:	• Preliminary Assessment; • Removal
Tasks:	• Determine appropriate response action.
Documentation:	• Contact reports; • Correspondence.
Additional Site Management Activities:	• Notify National Response Center, Governor of the State, USEPA Region, Regional Response Team, and Natural Resource Trustees.
USEPA/State Activities	• Enter site in Federal Agency Hazardous Waste Compliance Docket (USEPA)

3.4.2 Preliminary Assessment

The purposes of a PA are to:

- Describe the source and nature of a release;
- Evaluate the type, magnitude, and likelihood of threats to public health and welfare and/or the environment;
- Determine the need for removal, SI, RI/FS, or no action; and
- Gather existing data to facilitate HRS2 scoring.

Available information is used to prepare the PA. Types and sources of information include:

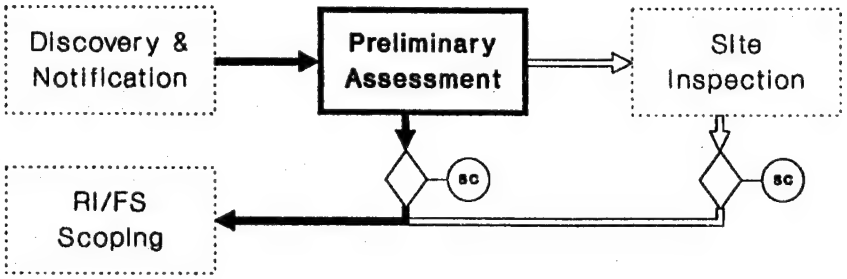
- Interviews with currently employed or retired personnel;
- Records of past waste generation and site management practices;
- Aerial photographs;
- Perimeter inspection of potential sites;
- On-site inspections, if this can be done safely; and
- Any previous sampling results.

PAs should be conducted and the results reported as indicated in "Guidance for Performing Preliminary Assessments Under CERCLA" (USEPA, September 1991). A removal action may be taken during a PA if it is found that an immediate or imminent threat to public health or welfare exists at the site. Figure 3-4 summarizes the elements of the PA step.

The conclusion of a PA will be a determination to:

- Implement a removal if an imminent threat is recognized, if there are effective methods to control the source or potential source of contamination, or if the removal will substantially reduce the possibility of human exposure to hazardous substances. This option does not preclude also initiating a SI or a RI/FS;
- Initiate a RI/FS if it is obvious that a remedial action will be needed;
- Closeout a site if reasonable efforts fail to indicate that a release of hazardous substances, pollutants, or contaminants has occurred or may occur; or
- Initiate a SI if information is insufficient to support another determination.

Figure 3-4: Elements of the Preliminary Assessment Step



Purposes:	• Eliminate from further consideration those releases that pose neither threat nor potential threat to public health, welfare, or the environment. • Determine need for removal actions. • Collect data to characterize the release for effective, rapid initiation of RI/FS.
Potential Subsequent Actions:	• No Action • SI • RI/FS • Removal
Tasks:	• Records Search • Photo Interpretation • Interviews • Site Visit • HRS2 Scoring Package
Documentation:	• PA Report • USEPA PA Report
Additional Site Management Activities:	• Notify natural resources trustee if damage expected. • Submit HRS2 scoring package to USEPA if data are sufficient • Comment on USEPA proposal to include site on NPL, as appropriate.
USEPA/State Activities	• HRS2 Scoring (if data are sufficient) • HRS2 Quality Assurance/Quality Control • NPL Proposal • NPL Listing

3.4.3 Site Inspection

The SI is an optional step. RPMs may use the SI step to develop new information needed to decide whether to initiate a removal, begin a RI/FS, or terminate response activities. If the need for a remedial action is apparent from a PA, the RPM may begin scoping the RI/FS without delay. Site sampling data developed during a removal, Site Characterization activities of a RI or a SI should be submitted to USEPA if required to support HRS2 scoring.

USEPA will use the HRS2 score to determine eligibility for the NPL (using a threshold of 28.5). The Army considers HRS2 scores in establishing priorities for initiating a RI/FS. However, the Army will continue the remedial action process for sites with low HRS2 score if they pose significant threats to public health, welfare, or the environment.

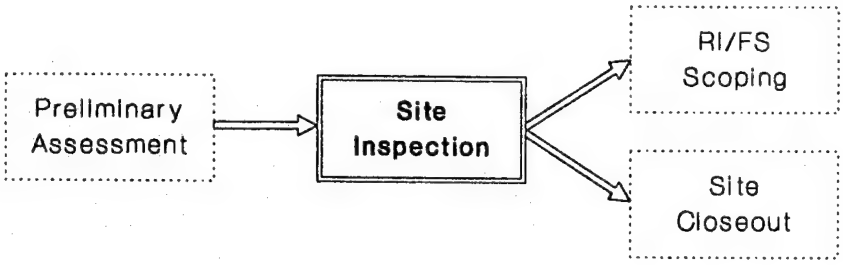
Preparation for a SI, as with any other on-site activities, will require the conduct of concurrent activities as described in Chapter 4. A Site Health and Safety Plan and a Sampling and Analysis Plan (SAP) may need to be developed. If the SAP requires off-post sampling, verbal request and approval will be obtained from HQDA through higher headquarters, in accordance with AR 200-1, Section 9-8. If the field activities could intrude on sensitive environmental resources, these resources should be assessed in accordance with NEPA.

Results of SIs should be documented in a report that, at a minimum:

- Redefines the source and nature of the release;
- Concludes whether site closeout, removal, or a RI/FS is warranted; and
- Includes completed USEPA SI Form 2070-13 (USEPA, 1981), if required by the USEPA regional office.

Figure 3-5 summarizes elements of the SI step.

Figure 3-5: Elements of the Site Inspection Step



Purposes:	• Eliminate from further consideration those releases that pose neither threat nor potential threat to public health, welfare, or the environment. • Determine need for removal actions. • Collect data to characterize the release for effective, rapid initiation of RI/FS.
Potential Subsequent Actions:	• No Action • RI/FS • Removal • Monitoring
Tasks:	• Prepare Work Plan, SAP, and Health and Safety Plan. • Establish Data Quality Objectives • Sample soils, sediments, groundwater, surface water as appropriate.
Documentation:	• Work Plan, SAP, and Worker Health and Safety Plan • SI Report • HRS2 Scoring Package
Additional Site Management Activities:	• Submit HRS2 scoring package to USEPA • Comment on USEPA proposal to include site on NPL
USEPA/State Activities:	• HRS2 Scoring • HRS2 Quality Control/Quality Assurance • NPL Proposal • NPL Listing

3.5 INVESTIGATION PHASE (RI/FS)

The purpose of the Investigation phase is to determine the nature and extent of the threat presented by a site and, if warranted by site sampling data and a Baseline Risk Assessment, to evaluate proposed remedies.

The Remedial Investigation (RI) is conducted to obtain data about the site and waste characteristics, their hazards, and routes of exposure. Information pertinent to treatability of wastes and the performance of treatment processes may also be developed.

During the Feasibility Study (FS), potential remedial alternatives are developed and screened, and the most promising alternatives are evaluated by specified criteria.

Incorporated within the Investigation phase is a Baseline Risk Assessment (see Chapter 4.7). The Baseline Risk Assessment summarizes and interprets RI data, identifies contaminant transport pathways and receptors, and assesses actual or potential harm to the public or the environment. It defines the need for remedial action and serves to focus remedial action alternatives.

The end product of a RI/FS is the selection of a preferred remedial action that:

- Has demonstrated needs as supported by valid site data and a Baseline Risk Assessment, and
- Is judged to be the best means of meeting those needs in light of the following nine criteria: overall protection of human health and the environment; compliance with cleanup requirements; long-term effectiveness and permanence; reduction of toxicity, mobility, or volume through treatment; short-term effectiveness; implementability; cost; State acceptance; and community acceptance.

The process for achieving that end product is described in this section (3.5). Note that virtually all of the concurrent requirements discussed in Chapter 4 will have to be addressed during an RI/FS to successfully achieve the end product.

The final two steps of an RI/FS (detailed analysis of alternatives, and selection of remedy) include the preparation of a proposed plan which is provided for public and regulatory agency comment, and a public meeting to discuss the preferred alternative. Once inputs from these presentations are addressed, the RI/FS is concluded by selection of the remedy. The selection is documented by a ROD for NPL sites and by a DD for non-NPL sites.

The seven RI/FS steps may be implemented in an iterative manner depending on the site's complexity and the availability of a clearly superior alternative. Scoping, Site Characterization, and Detailed Analysis of Alternatives are the steps most likely to require repetition or reconsideration.

For additional information on conducting an RI/FS, refer to Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA (USEPA, October 1988).

3.5.1 RI/FS Scoping

The following activities are normally conducted during the first step, Scoping:

- Identify the RI/FS study area. The specific IRP sites to be evaluated should be designated. The media that may be contaminated and populations and resources that may be exposed to the contamination should be delineated on a conservative basis from available information. Properties, transportation routes, treatment and disposal facilities, and any environmental resources that may be used for or directly impacted by potential remedial actions should be identified as the basis for evaluating location-specific ARARs and environmental impacts of alternatives.

- Determine appropriate response mechanisms and authorities. In coordination with the appropriate MACOM, State regulatory agency, regional office of USEPA, and the Installation Commander, develop an agreement on which State and Federal laws are applicable, on what roles that each party will play in studying the site, and on what decision-making authority each party will have relative to the site.

- For sites proposed for or listed on the NPL, begin negotiations with USEPA on the IAG.

- Initiate confirmatory data collection if needed, but not previously accomplished.

- Identify likely response scenarios and potentially applicable technologies and operable units that may address site problems.

- Describe scope of subsequent RI/FS steps. Prepare statement of work (SOW). Prepare Site Safety and Health Plan. Coordinate with the U.S. Army Environmental Hygiene Agency regarding data requirements to support human health evaluations. Prepare SAP for Site Characterization step. Obtain HQDA verbal approval through higher headquarters in advance for any necessary off-post sampling, in accordance with AR 200-1, Section 9-8. Site specific data needs, the evaluation of alternatives, and documentation of the selected remedy should reflect the scope and complexity of the site problems being addressed.

- Determine whether the remedial action is likely to be a major Federal action or will have significant environmental impacts, and refer to AR 200-2, Ch. 2-2a(8)(a) and (b) for possible NEPA exemption. Ensure that the CERCLA documents will be prepared in accordance with NEPA (see AR 200-1, Ch.9-7(c)).

- Identify need for and set priorities for removals, operable units, and continuing monitoring requirements while the RI/FS is being conducted.

- Identify preliminary Federal contaminant- and location-specific ARARs based on available data and confirmatory data, if collected. Submit to State regulatory

agency and request State ARARs.

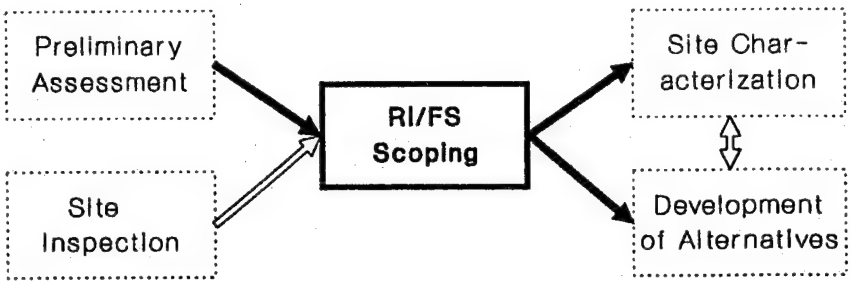
- Conduct community interviews and prepare a CRP.
- Establish a Technical Review Committee or Restoration Advisory Board.
- Initiate an Administrative Record and develop an information repository.

Figure 3-6 lists the elements of RI/FS Scoping. Figure 3-7 shows, in a flow diagram, how key elements are related.

An RI/FS seldom will be so predictable that all activities can be accurately forecast during initial scoping. The RPM should be prepared to adjust the scope of activities as new information is developed. Establishing decision points at which the scope of ongoing and future activities will be reexamined may be helpful in managing contracts and in communicating progress to other interested parties. Likely decision points are:

- At the conclusion of each round of site sampling during Site Characterization;
- When the Baseline Risk Assessment is prepared;
- At the conclusion of Screening Alternatives;
- After publication of the Initial Release Health Assessment by ATSDR;
- During or after bench or pilot scale testing of technologies; or
- After implementation of removals or operable units.

Figure 3-6: Elements of the RI/FS Scoping Step



Purposes:	• Describe type and content of studies needed to undertake response actions • Determine need for removal actions • Determine appropriate response mechanisms and authorities • Identify preliminary RI/FS and environmental assessment study areas • Set priorities for implementation of removal actions, operable units and RI/FS phases
Potential Subsequent Actions:	• Site Characterization • Development of Alternatives • Removal Action • Operable Unit
Tasks:	• Prepare Community Relations Plan • Determine preliminary ARARs • Begin to formulate likely remedial alternatives • Develop Sampling and Analysis Plan and Worker Health and Safety Plan
Documentation:	• Community Response Plan • Sampling and Analysis Plan • Worker Health and Safety Plan • Work Plan for RI/FS
Additional Site Management Activities:	• Establish local information repository and administrative record • Request preliminary State ARARs • Establish Technical Review Committee • For sites proposed or listed on NPL, begin negotiations on Interagency Agreements
USEPA/State Activities:	• Review Federal ARARs • Provide State ARARs (State) • Negotiate Interagency Agreement for NPL Sites (EPA)

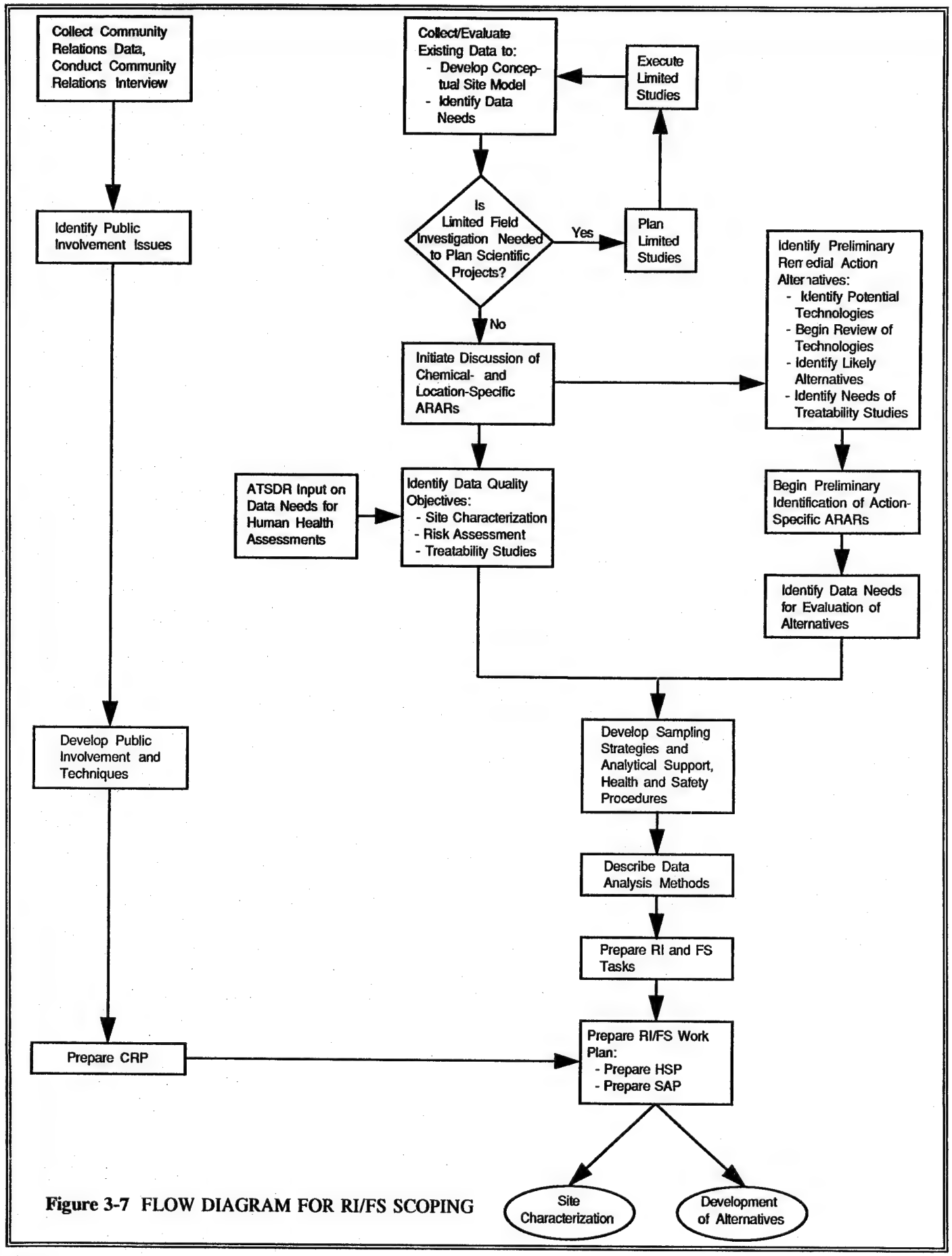


Figure 3-7 FLOW DIAGRAM FOR RI/FS SCOPING

3.5.2 Site Characterization

During Site Characterization, the SAP developed during scoping is implemented. Field data are obtained and analyzed to assess the nature of any threats the site poses to human health or the environment and to support the analysis and design of potential response actions. The major steps in Site Characterization include:

- Collecting soil, sediment, groundwater, surface water, and air samples as specified in the SAP;
- Analyzing samples in the laboratory;
- Evaluating laboratory results to characterize the site;
- Determining the adequacy of data for developing and evaluating remedial alternatives; and
- Developing a Baseline Risk Assessment.

Results of the Site Characterization are documented in a draft RI report. The recommended format for this report is presented in Table 3-1.

Results may indicate that the threat is more immediate than previously understood, in which case removals or operable units may be initiated. However, if the Baseline Risk Assessment shows that a significant threat does not exist, then the RPM prepares a no action ROD for an NPL site. For non-NPL sites, a Site Closeout document should be prepared.

Figure 3-8 lists the elements of Site Characterization. Figure 3-9 shows, in a flow diagram, how key elements are related.

TABLE 3-1 RECOMMENDED REMEDIAL INVESTIGATION REPORT FORMAT

Executive Summary

1. Introduction

- 1.1 Purpose of Report
- 1.2 Site Background
  - 1.2.1 Site Description
  - 1.2.2 Site History
  - 1.2.3 Previous Investigations
- 1.3 Report Organization

2. Study Area Investigation

- 2.1 Includes field activities associated with site characterization. These may include physical and chemical monitoring of some, but not necessarily all, of the following:
  - 2.1.1 Surface Features (topographic mapping, etc.) (natural and manmade features)
  - 2.1.2 Contaminant Source Investigations
  - 2.1.3 Meteorological Investigations
  - 2.1.4 Surface-Water and Sediment Investigations
  - 2.1.5 Geological Investigations
  - 2.1.6 Soil and Vadose Zone Investigations
  - 2.1.7 Ground-Water Investigations
  - 2.1.8 Human Population Surveys
  - 2.1.9 Ecological Investigations
- 2.2 If technical memoranda documenting field activities were prepared, they may be included in an appendix and summarized in this report chapter.

3. Physical Characteristics of the Study Area

- 3.1 Includes results of field activities to determine physical characteristics. These may include some, but not necessarily all, of the following:
  - 3.1.1 Surface Features
  - 3.1.2 Meteorology
  - 3.1.3 Surface-Water Hydrology
  - 3.1.4 Geology
  - 3.1.5 Soils
  - 3.1.6 Hydrogeology
  - 3.1.7 Demography and Land Use
  - 3.1.8 Ecology

4. Nature and Extent of Contamination

- 4.1 Presents the results of site characterization, both natural chemical components and contaminants in some, but not necessarily all, of the following media:
  - 4.1.1 Sources (lagoons, sludges, tanks, etc.)
  - 4.1.2 Soils and Vadose Zone
  - 4.1.3 Groundwater
  - 4.1.4 Surface Water
  - 4.1.5 Air

TABLE 3-1 RECOMMENDED REMEDIAL INVESTIGATION REPORT FORMAT (continued)

5. Contaminant Fate and Transport

- 5.1 Potential Routes of Migration (i.e., air, groundwater, etc.)
- 5.2 Contaminant Persistence
  - 5.2.1 If they are applicable (i.e., for organic contaminants), describe estimated persistence in the study area environment and physical, chemical, and/or biological factors of importance for the media of interest.
- 5.3 Contaminant Migration
  - 5.3.1 Discuss factors affecting contaminant migration for the media of importance (e.g., sorption onto soils, solubility in water, movement of groundwater, etc.)
  - 5.3.2 Discuss modeling methods and results, if applicable.

6. Baseline Risk Assessment

- 6.1 Human Health Evaluation
  - 6.1.1 Exposure Assessment
  - 6.1.2 Toxicity Assessment
  - 6.1.3 Risk Characterization
- 6.2 Environmental Evaluation

7. Summary and Conclusions

- 7.1 Summary
  - 7.1.1 Nature and Extent of Contamination
  - 7.1.2 Fate and Transport
  - 7.1.3 Risk Assessment
- 7.2 Conclusions
  - 7.2.1 Data Limitations, Baseline Risk Assessment Analysis of Uncertainty, and Recommendations for Future Work
  - 7.2.2 Recommended Remedial Action Objectives

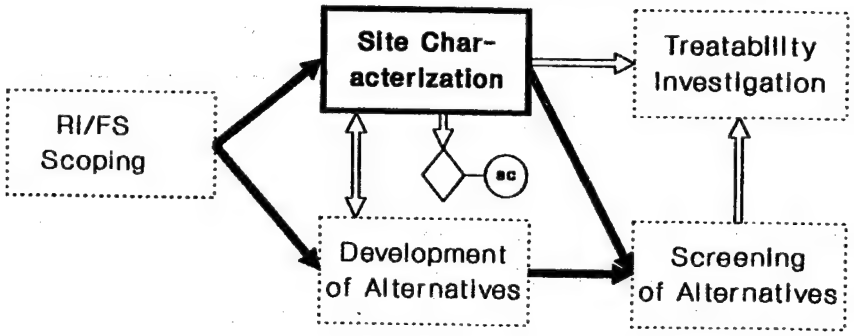
8. References/Bibliography

Appendices

- A. Technical Memoranda on Field Activities (if available)
- B. Analytical Data and QA/QC Evaluation Results
- C. Risk Assessment Methods

Source: USEPA, October 1988

Figure 3-8: Elements of the Site Characterization Step



Purposes:	Determine extent of threat to human health or the environment • Provide basis for determining types of response actions to be considered
Potential Subsequent Actions:	• Additional Field Investigations • Development of Alternatives (may be concurrent) • Screening of Alternatives
Tasks:	• Implement Sampling and Analysis Plan • Redefine RI/FS study area • Refine Remedial Action goals • Review ARARs • Prepare Baseline Risk Assessment • Scoring for Defense Prioritization System
Documentation:	• Draft RI Report • Baseline Risk Assessment (may be combined with RI Report)
Additional Site Management Activities:	• Request State to verify ARARs
USEPA/State Activities:	• Verify ARARs (State)

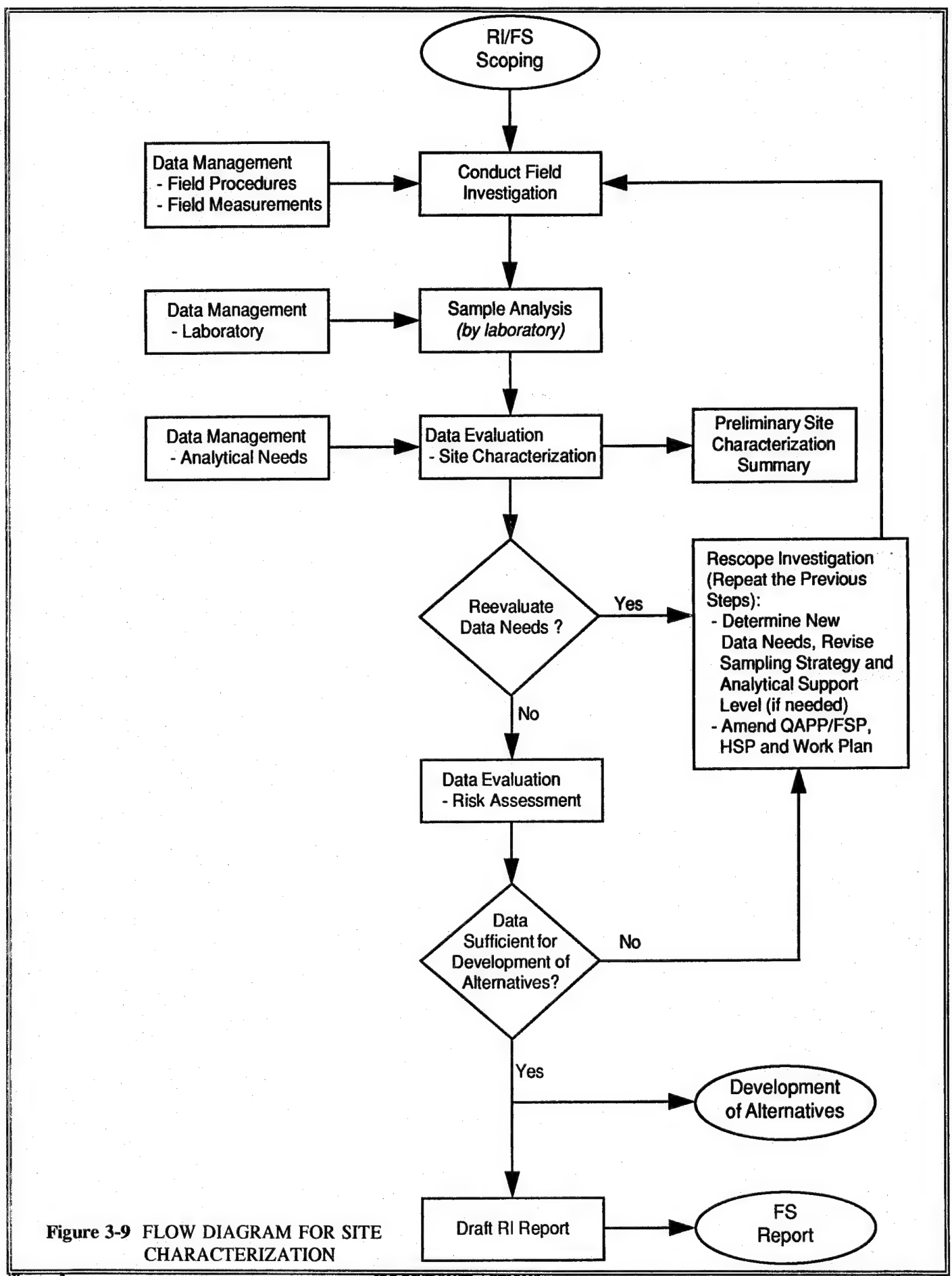


Figure 3-9 FLOW DIAGRAM FOR SITE CHARACTERIZATION

3.5.3 Development of Alternatives

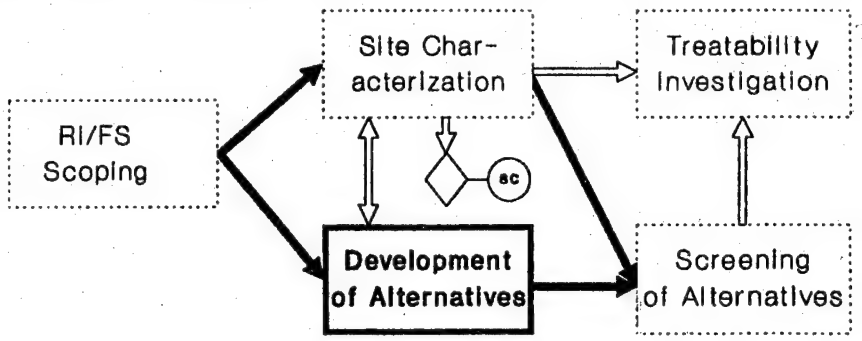
Depending on the number, spatial distribution, and complexity of sites in the RI/FS study area, a number of specific control technologies may ultimately be combined in the selected remedy. The process of identifying, evaluating, and selecting the right remedy begins with a review of control technologies and institutional controls (such as land use restrictions) that are appropriate to the site(s) and the threat it poses.

Appendix D of the NCP (included as Appendix C of this Guidance) lists control technologies that should be considered. Technologies that are not appropriate for use on any site in the RI/FS study area may be eliminated from further consideration. To show that such technologies were reviewed, they may be listed in an appendix to the Feasibility Study with brief statements indicating why each was considered to be inappropriate.

Appropriate technologies and institutional controls are then combined on a site-by-site basis to formulate complete, potentially protective alternatives for permanent remediation.

Figure 3-10 lists the elements of the Develop Alternatives step. Figure 3-11 shows, in a flow diagram, how key elements are related.

Figure 3-10: Elements of the Development of Alternatives Step



Purposes:

- Determine need for remedial action or operable units
- Identify potential remedial action alternatives

Potential Subsequent Actions:

- Screen alternatives

Tasks:

- Identify potential treatment technologies
- Identify containment/disposal requirements for residual or untreated wastes
- Evaluate technologies
- Assemble suitable technologies into alternative remedial actions
- Identify action-specific ARARs

Documentation:

Additional Site Management Activities:

USEPA/State Activities:

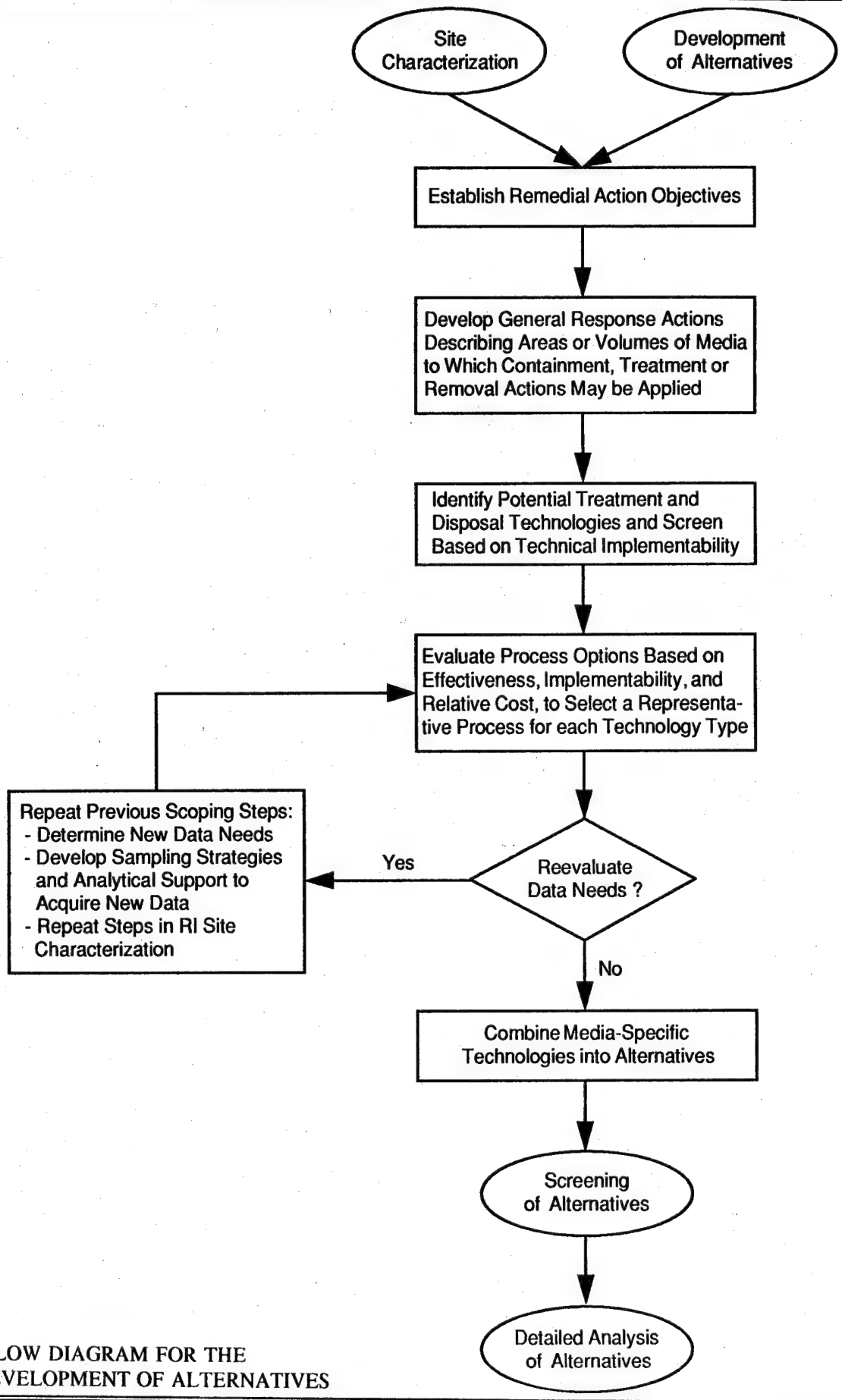


Figure 3-11 FLOW DIAGRAM FOR THE DEVELOPMENT OF ALTERNATIVES

3.5.4 Screen Alternatives

Alternatives identified in the first step of the FS may need to be screened using three broad criteria in order to select a reasonable number of alternatives for detailed analysis:

- Effectiveness in reducing the threat;
- Implementability; and
- Cost.

At this stage, costs should be order-of-magnitude, but should include long-term operation and maintenance as appropriate. Factors such as constructability; expected opposition from the public; impact on the installation's mission; compatibility with planned land uses; and availability of material, equipment, technical expertise or off-site treatment and disposal facilities may be considered in evaluating implementability. Demonstrated ability of component technologies to achieve design goals should be addressed in evaluating effectiveness. Adverse environmental impacts that are predictable at this stage should also be considered in evaluating effectiveness. Calculations, assumptions, and references supporting these evaluations will be documented in the FS.

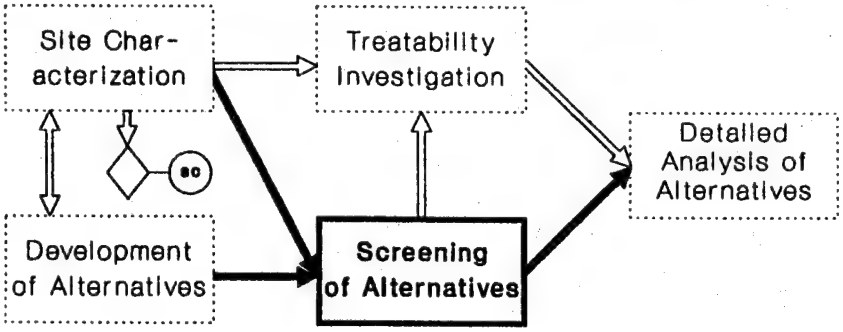
Alternatives that would provide no clear advantage in cost, implementability, or effectiveness may be eliminated from consideration. However, alternatives that offer significant advantages by one criterion should be retained for Detailed Analysis even if they are inferior by other criteria.

Once the alternatives are identified that will be subjected to Detailed Analysis, they should be reviewed to identify any Federal location-specific or action-specific Applicable or Relevant and Appropriate Requirements (ARARs) that would apply to each alternative's implementation or operation. Descriptions of the alternatives and such ARARs should normally be transmitted to State regulatory agencies for identification of any State ARARs that may be more stringent.

The alternatives should also be reviewed at this point to determine whether any Treatability Investigation efforts are needed either to better define or cost an alternative, or to provide information for predicting an alternative's effectiveness and environmental impacts.

Figure 3-12 lists the elements of the Screening of Alternatives step.

Figure 3-12: Elements of the Screening of Alternatives Step



Purposes:	• Narrow list of potential remedial alternatives for detailed analysis
Potential Subsequent Actions:	• Field investigations • Detailed Analysis of Alternatives
Tasks:	• Screen alternatives for - Effectiveness - Implementability - Cost
Documentation:	
Additional Site Management Activities:	• Notify State of final alternatives for action-specific ARARs
USEPA/State Activities:	

3.5.5 Treatability Investigation

Considered to be a part of the RI, the Treatability Investigation is an optional step that depends on information requirements for subsequent Detailed Analysis of Alternatives. Treatability Investigation may include:

- Literature surveys for candidate control technologies;
- Bench and pilot scale treatability testing; and
- Collection of additional field data.

As is the case with any field data collection, a SAP, a Site Health and Safety Plan should be prepared prior to collection of additional field data, and may be appropriate for treatability testing. If any new off-post sampling efforts are required, verbal approval will be obtained in advance from HQDA through higher headquarters in accordance with AR 200-1, Section 9-8 and follow up in writing. A new RCS-1383 will be required for such new sampling efforts.

Figure 3-13 lists potential elements of the Treatability Investigation step.

3.5.6 Detailed Analysis of Alternatives and the Draft Feasibility Study

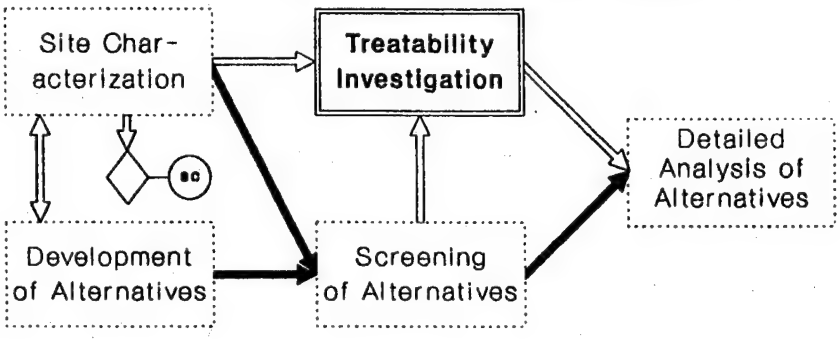
Once a limited number of viable alternatives has been developed and ARARs have been identified the alternatives are evaluated against nine criteria specified in 40 CFR 300.430 and listed in Table 3-2. Note that State and community acceptance may not be evaluated fully until the Proposed Plan is published and public review is completed during the selection of remedy step. The analysis of short-term effectiveness will include, as appropriate, an evaluation of any impacts on the installation's mission.

Analyses of ARARs, long-term effectiveness and permanence, and the environmental impact component of short-term effectiveness will provide the evaluations required for compliance with the NEPA. The cover page of each FS and combined RI/FS shall include the legend: "This document is intended to satisfy the purposes of the National Environmental Policy Act of 1969"

The detailed analysis of alternatives is presented in a FS or may be combined with the results of the RI in a combined RI/FS. The recommended format for a FS is presented in Table 3-3.

Figure 3-14 lists the elements of the Detailed Analysis of Alternatives step. Figure 3-15 shows, in a flow diagram, how key elements are related.

Figure 3-13: Elements of the Treatability Investigation Step



Purposes:	• Obtain data for detailed evaluation of alternatives
Potential Subsequent Actions:	• Detailed Analysis of Alternatives
Tasks:	• Literature surveys on treatment technologies • Bench tests and pilot scale treatability tests • Collection of additional field data
Documentation:	• Remedial Investigation Report
Additional Site Management Activities:	
USEPA/State Activities:	• Review Remedial Investigation Report (State and EPA)

TABLE 3-2 - CRITERIA FOR EVALUATING AND COMPARING ALTERNATIVES GROUPED BY THEIR ROLES IN SELECTING THE REMEDY

Threshold Criteria - must be satisfied unless waived in accordance with 40 CFR 300.430 (f)(l)(ii)(C)

- Overall protection of human health and the environment combines:
  - long-term effectiveness and permanence (below);
  - short-term effectiveness (below);
  - compliance with ARARs (below).
- Compliance with ARARs categorized as:
  - contaminant specific;
  - location specific;
  - action specific;
  - other criteria advisories and guidance.

Primary Balancing Criteria - form basis for comparison

- Long-term effectiveness and permanence based on:
  - residual risk from untreated waste or treatment residuals remaining after remediation;
  - adequacy and reliability including reliance on land-disposal, potential need to replace, and risks posed should components need replacement.
- Reduction of toxicity, mobility, or volume through treatment considering:
  - processes used;
  - amount of hazardous substances, pollutants or contaminants, destroyed, treated, or recycled;
  - degrees of reduction in toxicity, in mobility, and in volume;
  - irreversibility of treatment;
  - type, quantity, persistence, toxicity, mobility, and propensity to bioaccumulate of remaining hazardous substances;
  - reduction in principal threats at the site.
- Short-term effectiveness including:
  - community impacts during implementation;
  - impacts on workers and the effectiveness and reliability of protective measures;
  - environmental impacts during implementation and the effectiveness and reliability of mitigating measures;
  - time until protection is achieved.
- Implementability including:
  - technical feasibility including technical difficulties and unknowns in construction and operation, reliability, ease of replacement or augmentation, and ability to monitor effectiveness;
  - administrative feasibility including need to coordinate with other agencies and ability and time required for permits and approvals;
  - availability of services, materials, equipment, and specialists.
- Cost including:
  - capital, both direct and indirect;
  - annual operation and maintenance;
  - net present value.

Modifying Criteria - considered in remedy selection

- State acceptance including:
  - preferences for and concerns with alternatives;
  - comments on ARARs and proposed use of waivers.
- Community Acceptance

TABLE 3-3 RECOMMENDED FEASIBILITY STUDY REPORT FORMAT

Executive Summary

1. Introduction
   - 1.1 Purpose and Organization of Report
   - 1.2 Background Information (Summarized from RI Report)
     - 1.2.1 Site Description
     - 1.2.2 Site History
     - 1.2.3 Nature and Extent of Contamination
     - 1.2.4 Contaminant Fate and Transport
     - 1.2.5 Baseline Risk Assessment
2. Identification and Screening of Technologies
   - 2.1 Introduction
   - 2.1 Remedial Action Objectives -
     Presents the development of remedial action objectives for each medium of interest (i.e., groundwater, soil, surface water, air, etc.). For each medium, the following should be discussed:
     - Contaminants of interest
     - Allowable exposure based on risk assessment (including ARARs)
     - Development of remediation goals
   - 2.3 General Response Actions -
     For each medium of interest, describes the estimation of areas or volumes to which treatment, containment, or exposure technologies may be applied.
   - 2.4 Identification and Screening of Technology Types and Process Options. For each medium of interest, describe:
     - 2.4.1 Identification and Screening of Technologies
     - 2.4.2 Evaluation of Technologies and Selection of Representative Technologies
3. Development and Screening of Alternative
   - 3.1 Development of Alternatives
     Describes rationale for combination of technologies/media into alternatives. Note: This discussion may be by medium or for the site as a whole.
   - 3.2 Screening of Alternatives (if conducted)
     - 3.2.1 Introduction
     - 3.2.2 Alternative 1
       - 3.2.2.1 Description
       - 3.2.2.2 Evaluation
     - 3.2.3 Alternative 2
       - 3.2.3.1 Description
       - 3.2.3.2 Evaluation
     - 3.2.4 Alternative 3
4. Detailed Analysis of Alternatives
   - 4.1 Introduction
   - 4.2 Individual Analysis of Alternatives
     - 4.2.1 Alternative 1
       - 4.2.1.1 Description
       - 4.2.1.2 Assessment
     - 4.2.2 Alternative 2
       - 4.2.2.1 Description
       - 4.2.2.2 Assessment
     - 4.2.3 Alternative 3
   - 4.3 Comparative Analysis

Bibliography
Appendices

Source: USEPA, October 1988

3.5.7 Selection of Remedy, the Proposed Plan, and Decision Documents

To begin the Selection of Remedy step, the Army will identify a preferred alternative from among those evaluated in the FS. Identification of the preferred alternative will be based first on each alternative's ability to satisfy the threshold criteria identified in Table 3-2, and then on trade-offs among alternatives considering the primary balancing criteria. The RPM will coordinate with the Installation Commander, MACOM, USACE, USAEC, and others as directed in identifying this alternative. For sites proposed for or listed on the NPL, the RPM will also coordinate with HQDA, ODEP, with DEP and the DASA(ESOH). The RPM will request from HQDA, ODEP a review of any preferred alternatives that involve off-post response actions.

The preferred alternative is presented to the public in a Proposed Plan that also briefly describes the other alternatives that were considered and summarizes the information relied upon to select the preferred alternative. If waivers to ARARs (see 40 CFR 300.430 (f)(1)(ii)(C)) are required, an explanation of the basis for waiver should be included. Any formal State comments on ARARs or alternative selection should also be summarized in the Proposed Plan.

The FS and Proposed Plan are sent to regulatory agencies for review and comment and are made available for public review and comment in accordance with minimum requirements and any additional measures specified in the CRP.

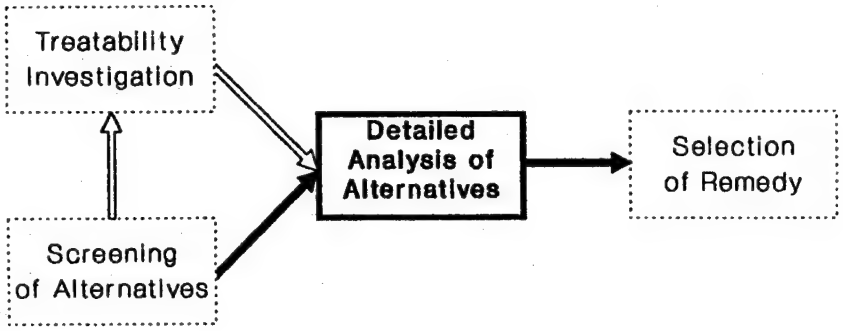
Following public and regulatory agency review, the RPM will summarize significant comments received and will prepare responses. The proposed responsiveness summary will be distributed to each Army party involved in the initial identification of the preferred alternative. The RPM will coordinate the Army's reaction to public and agency comments, revise the responsiveness summary accordingly, and adopt or amend the preferred alternative accordingly to arrive at the selected remedy.

The selection will be documented in a DD for non-NPL sites, and for operable units or removals at NPL sites. A ROD will be used to document remedy selection for final remedial actions at NPL sites. If design or construction is to be phased due to funding limitations or complexity of the remedy, the operable units should be identified. Any activity which could potentially involve use of DERP funds must reference potential Anti-Deficiency Act limitations on performance and state that in the event of a shortage of funds, a prioritization process will occur. All DDs and RODs will be signed by the Installation Commander. RODs and any DDs with a non-Army signature will be approved and signed by DASA(ESOH) prior to transmittal to USEPA for concurrence. A notice of the decision and of the availability of the document should be publicized in accordance with public participation guidance.

See USEPA Guidance on Preparing Superfund Decision Documents (USEPA, July 1989) for additional information on preparation of Proposed Plans, DDs, and RODs.

Figure 3-16 lists elements of the Selection of Remedy step.

Figure 3-14: Elements of Detailed Analysis of Alternative Step



Purposes:	• Describe, evaluate and compare alternatives
Potential Subsequent Actions:	• Selection of Remedy
Tasks:	• Describe Alternatives in sufficient detail for analysis • Evaluate and compare alternatives according to: - overall protection of human health and the environment - compliance with ARARs - long-term effectiveness and permanence - reduction of toxicity, mobility or volume through treatment - short-term effectiveness - implementability - cost - state acceptance - community acceptance
Documentation:	• Feasibility Study or RI/FS
Additional Site Management Activities:	• Request State to certify identification of ARARs
USEPA/State Activities:	• Review Feasibility Study or RI/FS (State and EPA) • Certify identification of ARARs (State)

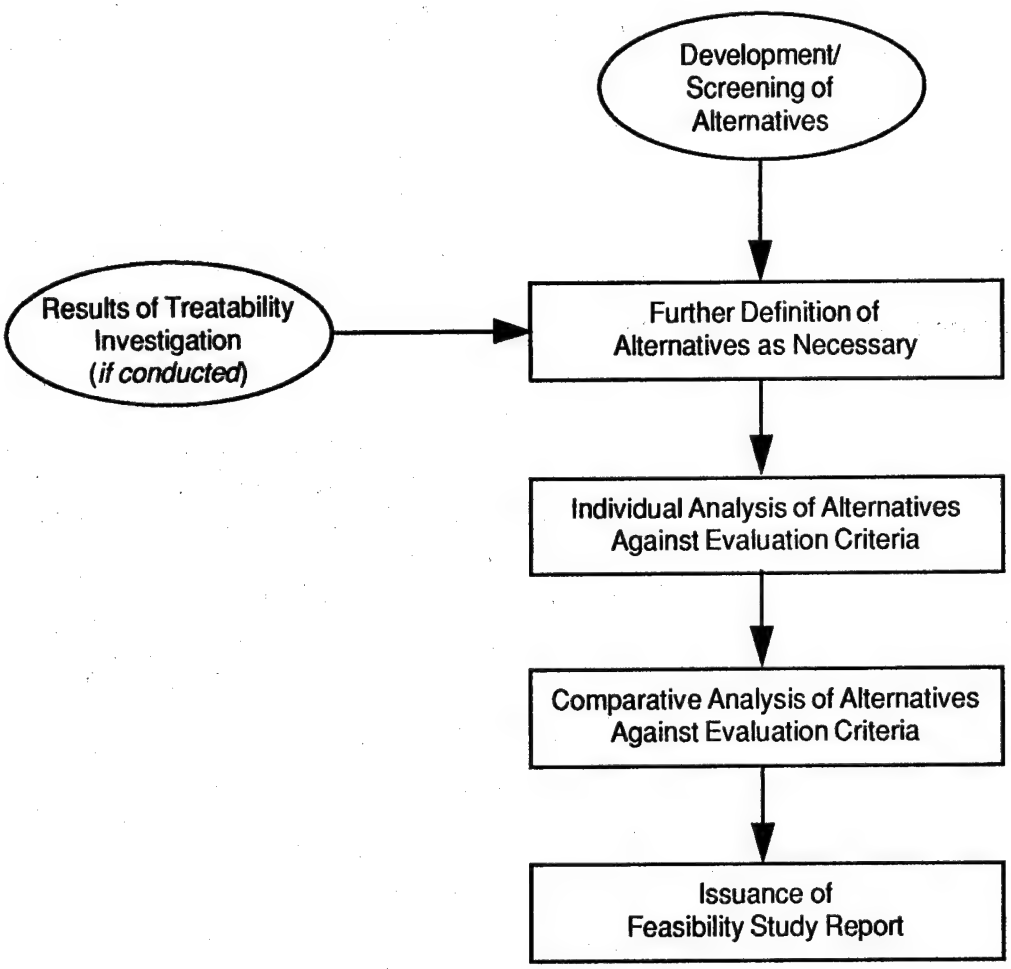
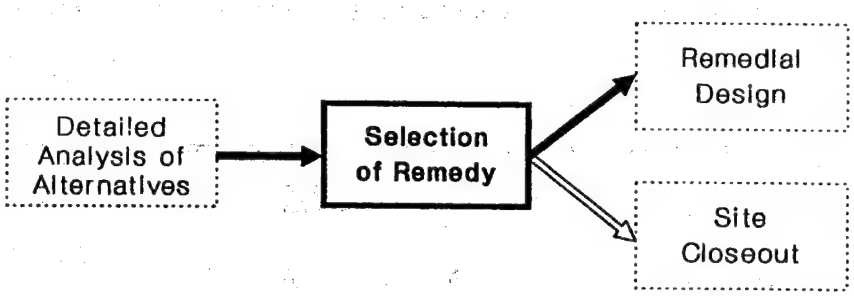


Figure 3-15 FLOW DIAGRAM FOR DETAILED ANALYSIS OF ALTERNATIVES

Figure 3-16: Elements of the Selection of Remedy Step



Purposes:	• Select remedial action
Potential Subsequent Actions:	• Site Closeout • Monitoring • Removal Action • Operable Units
Tasks:	• Select remedial action
Documentation:	• Proposed Plan • Notice of Proposed Plan availability • Public hearing transcript • Record or Decision or Decision Document including responses to comments to Proposed Plan • Notice of ROD availability
Additional Site Management Activities:	• Public hearing on Proposed Plan
USEPA/State Activities:	

3.5.8 Generic Time Line for RI/FS

The actual time to conduct an RI/FS for a particular site will depend on a variety of factors. Nominal times in months and a generic sequence of activities for conducting an RI/FS are illustrated in Figure 3-17.

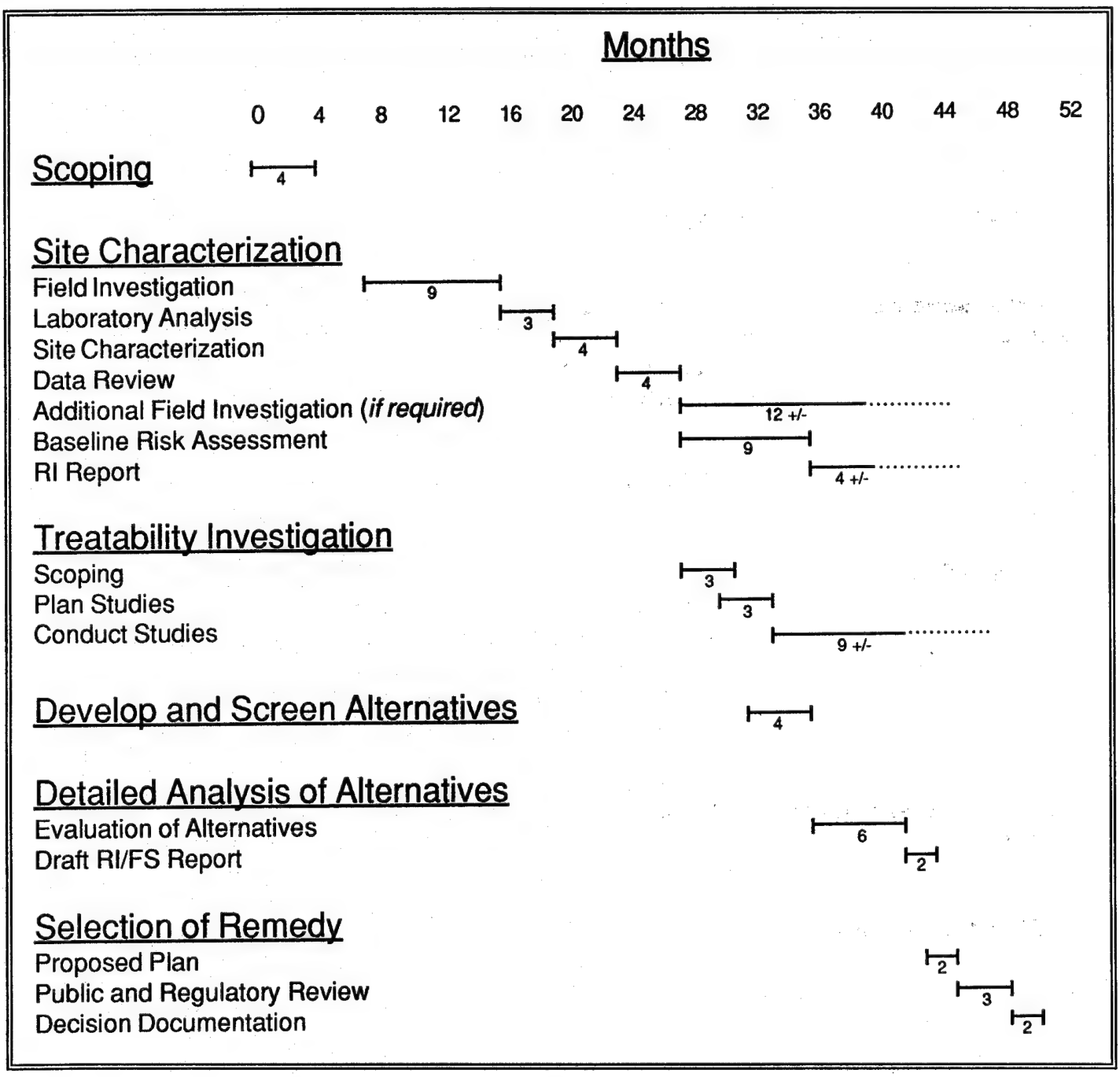


Figure 3-17 GENERIC TIME LINE FOR RI/FS

3.6 CLEANUP PHASE (RD/RA)

3.6.1 Remedial Design

The purpose of RD is to convert the conceptual design for the selected remedy into a final design that is biddable and implementable. If the selected remedy was divided into operable units, the design may also be divided at the discretion of the RPM. Similarly, the frequency and level of design reviews are at the discretion of the RPM. The remedial design may proceed to the 35% review prior to finalization of the ROD or DD.

The final design package will typically include final design plans and specifications; a construction cost estimate; draft Operation, Maintenance and Monitoring Plan; and a final Quality Assurance Program Plan (QAPP).

As appropriate, specifications may include requirements that the remedial action contractor develop and document compliance with:

- A Site Security Plan;
- A Site Health and Safety Plan;
- Fugitive Dust and Water Runoff Control Plan including ambient conditions monitoring during construction; and
- Plans for mitigating other environmental impacts.

If during the RD step, new information comes to light that would substantially alter the scope, cost, implementability, or effectiveness of the remedial action, the previous Selection of Remedy step may have to be repeated including public participation requirements. Refer to the NCP and seek guidance from higher headquarters and USAEC should this occur.

If the CRP prepared during the RI/FS phase is no longer appropriate for RD or RA steps, it should be revised early in the RD step.

Permits, approvals, and site access agreements, if required, will generally be obtained during RD. Cooperation between the RPM and installation legal, engineering or public affairs staff may be needed to secure these.

After the completion of the final engineering design, a fact sheet must be issued to notify the media and the public and, as appropriate, a public briefing conducted.

Figure 3-18 lists elements of the Remedial Design step.

Figure 3-18: Elements of the Remedial Design Step

Purposes:	• Prepare design, specifications and bid documents for the Remedial Action • Prepare RD/RA Work Plan
Potential Subsequent Actions:	• Remedial Action
Tasks:	• Revise Community Relations Plan, as necessary • Conduct pilot scale testing, as necessary • Prepare design, specifications and bid documents
Documentation:	• Revised Community Relations Plan • Design, specifications and bid documents for Remedial Action • RD/RA Work Plan • Remedial Design Fact Sheet
Additional Site Management Activities:	
USEPA/State Activities:	

3.6.2 Remedial Action

The RA step involves implementation of the plans and specifications prepared during the RD step. The RA starts with the solicitation and award of a contract, continues though the final inspection and certification of project construction activities and culminates with the acceptance of the final project.

The primary responsibility for proper RA implementation rests with the contracting officer (KO), the contracting officer's technical representative (COTR), and the RPM. The relationship of the KO, COTR and RPM are described in detail in Chapter 5. The KO (or his/her assigned designee, the COTR or RPM) will supervise the RA including operations inspections, evaluation of progress reports, adjustment for contingencies and claims, and approvals of actions performed.

Figure 3-19 lists elements of the RA step.

Additional guidance for implementing RD/RAs may be found in USEPA's Guidance on Expediting Remedial Design and Remedial Action (USEPA, 1990).

3.6.3 Post-Project Activities

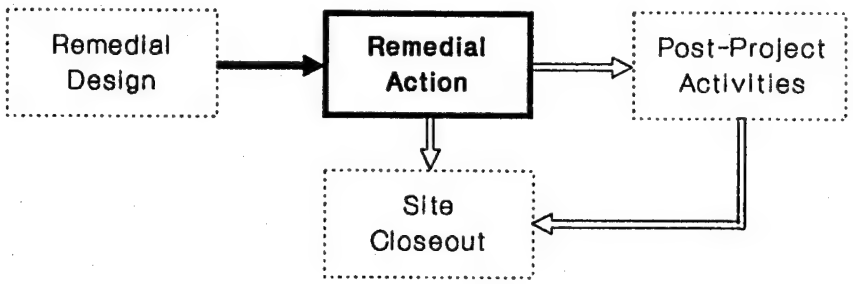
Many remedial technologies will require operation and maintenance of electro-mechanical equipment after the remedial action is installed. Structures and earthworks may require maintenance. Most sites that have hazardous substances remaining after the remedial action is installed will require periodic monitoring. Appropriate plans for these post-project activities will have been identified in the FS and ROD or DD, detailed during RD and implemented as appropriate.

Operation, maintenance, and monitoring activities are eligible for DERA funding for a period of ten years after completion of the remedial action after which installation O&M funds will be used. In cases where the remedy is divided into operable units, the ten-year limit applies to individual operable units.

In accordance with CERCLA Section 121(c), if hazardous substances, pollutants, or contaminants remain at a site after the RA step, the Installation Commander, with technical assistance from USAEC, will review monitoring records to ensure that human health and the environment are being protected. The compliance review will be made every five years beginning with the initiation of the Remedial Action step until the remedy is no longer needed.

Figure 3-20 lists elements of Post-Project Activities.

Figure 3-19: Elements of the Remedial Action Step



Purposes:	• Install remedial technologies • Implement land use controls • Program post-project activities
Potential Subsequent Actions:	• Post-Project Activities • Long Term Monitoring • Site Closeout
Tasks:	• Field activity management • Implement land use restrictions
Documentation:	• Worker Health and Safety Plan • Sampling and Analysis Plan for Post-Project Activities • Contractor documentation of: - work performed, equipment installed, site worker logs and visitor logs; - compliance with Worker Health and Safety Plan; - compliance with Data Quality Objectives • "As-built" drawings • O&M Manual for electro-mechanical equipment
Additional Site Management Activities:	• Program O&M resources for post-project activities
USEPA/State Activities:	

Figure 3-20: Elements of the Post-Project Activities Step

Purposes:	• Ensure continued compliance with project goals
Potential Subsequent Actions:	• Site Closeout • Reinitiation of response action, if necessary
Tasks:	• Periodic review of compliance with project goals • Operation and maintenance of electro-mechanical equipment • Monitoring
Documentation:	• Monitoring reports • Compliance review reports
Additional Site Management Activities:	
USEPA/State Activities:	• Review monitoring reports and 5-year compliance reviews as required

3.7 SITE CLOSEOUT PHASE (CLOSEOUT)

Figure 3-21 shows the major activities during the Site Closeout (SC) phase, which consists of a single step. As noted in Chapter 1, the SC phase has been separately identified to emphasize the importance of formally closing out IRP actions at sites.

Key objectives of the SC are to ensure that:

- The SC decision be formally made by MACOM (or the Installation Commander, if that responsibility has been so delegated);
- The SC decision is documented;
- Regulatory authorities and the public are notified of the SC decision;
- Concurrence on the SC decision is received, if necessary, from the USEPA and the State; and
- Delisting is conducted, if the site is on the NPL.

Justification for Making an SC Decision

The purpose of the IRP is to protect public health and the environmental from releases of hazardous substances from past disposal and spill sites. If a site does not threaten public health or the environment, it should be closed out. The conditions required to justify an SC decisions are site-specific. In general, the decision can be justified on any of the following findings:

- no evidence is collected in a preliminary assessment that indicates use of the site for hazardous waste handling, storage or disposal;
- a site inspection or site characterization shows there is no possibility of direct contact, fire or explosion, and samples taken at the site show that no hazardous substances are migrating or likely to migrate from the site;
- the conclusion of a public health evaluation or baseline risk assessment is that there is no significant threat to public health or the environment;
- SC is the selected alternative from the Selection of remedy step; or
- following the successful completion of monitoring, removals, remedial actions or post project activities.

Documentation

A Decision Document (DD) shall be prepared for each site or group of sites for which the SC decision is made. The DD should clearly identify the site, reference the data, studies and other evidence on which the decision is based, describe the rationale for the decision, and be signed by the MACOM or the Installation Commander if this responsibility has been delegated.

If the site is on the NPL, delisting procedures must be implemented as specified in the NCP.

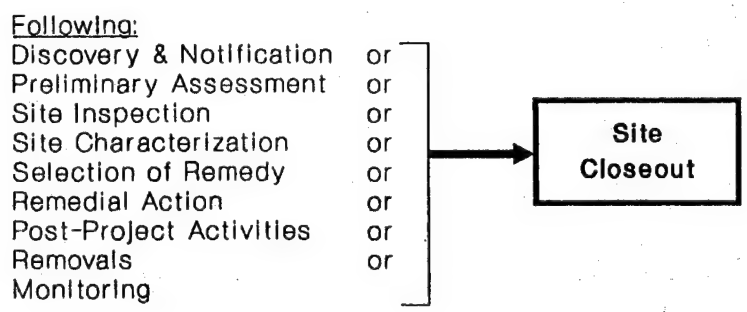
As discussed in Chapter 7, notification of the Site Closeout must be made to MACOMs, USAEC, USEPA, and State authorities which have been involved in the site's IRP process. Notice must also be published for public record, if deemed appropriate. Site closeout numbers are also reported to Congress as part of the DERP Annual Report to Congress.

Ongoing Responsibilities

Following the SC step, the site is technically removed from the IRP. However, the site may be reentered into the IRP if future conditions or new information suggests this is necessary.

The installation is cautioned to establish, maintain, and safeguard all information collected during the IRP response in site files. Actions regarding the site may occur years after the data has been gathered. It is crucial that records be sufficiently detailed and protected to provide a complete and accurate history of the remedial response in support of any future legal action. Well-organized information will aid the installation or MACOM in answering inquiries from Congress or requests from the general public under the Freedom of Information Act. Additionally, historical records are critical in supporting actions to close installations should they be identified for Base Closure. The IRP site files should be maintained at least 10 years, consistent with the Army IRP site documentation handling requirements.

Figure 3-21: Elements of the Site Closeout Step



Purposes:	•	Decide that all actions necessary or available to protect public health and environment have been taken
	•	document decision
	•	Inform EPA, State and local authorities of closeout decision
Potential Subsequent Actions:	•	None
	•	Reinitiation of response action if subsequent evidence shows this to be necessary
Tasks:	•	Prepare Decision Document and technical support documents
	•	MACOM or Installation Commander signs Decision Document
	•	For NPL sites, perform prescribed delisting procedures
Documentation:	•	Decision Document
	•	Technical support documents as needed to justify decision
Additional Site Management Activities:	•	Involve EPA, State in process
	•	Distribute Decision Document to appropriate persons, put documents in Administrative Record, Site File
	•	Publish notice of closeout
USEPA/State Activities:	•	Review and comment on decision (EPA, State)
	•	EPA concurrence required for NPL sites; EPA and State concurrence advisable for non-NPL sites
Note:	•	The SC step is appropriate to the completion of all response actions

3.8 OPERABLE UNITS

The regulatory definition of operable units is included in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), and promulgated in Title 40, Code of Federal Regulations (40 CFR), Part 300.5. The definition is promulgated as follows:

> *". . . a discrete action that comprises an incremental step toward comprehensively addressing site problems. This discrete portion of a remedial response manages migration, or eliminates or mitigates a release, threat of a release, or pathway of exposure. The cleanup of a site can be divided into a number of operable units, depending on the complexity of the problems associated with the site. Operable units may address geographical portions of a site, specific site problems, or initial phases of an action, or may consist of any set of actions performed over time or any actions that are concurrent but located in different parts of a site."*

Whether operable units (OUs) are implemented before or after selection of the final RA, they should not be inconsistent with the final action nor preclude its implementation. Operable units are subject to requirements for decision documentation, Administrative Records, information repositories, and public participation as these requirements apply to remedial actions.

Parts of remedial actions (i.e., operable units) may be implemented separately:

- To quickly achieve significant reductions in risk while other parts of the RA are being evaluated, selected, or designed;
- To provide a construction management tool for implementing large, complex, or multi-year RA; or
- To expedite the completion of total site cleanup.

3.9 REMOVALS

Removals may be implemented at any time during the remedial action process. Most removals will be implemented within a short period following discovery of a site. However, some imminent threats may not be revealed until construction during a remedial action. Other removals may be justifiable during the RI/FS phase.

To qualify as a removal, remedies must:

- Be implemented in response to an imminent threat to human health or the environment;
- Be effective in controlling the source or potential source of contamination; or

- substantially reduce the possibility of human exposure to hazardous substances

Removals implemented just for source control or for limiting exposure should be compatible with any remedial action that may be selected or be inexpensive enough to be considered expendable. Removals implemented in response to an imminent threat need not be compatible with future remedial actions, need not be shown to be cost-effective, and need not achieve ARARs if the urgency of the situation precludes deliberation of these goals. However, if the situation allows, these goals should be considered prior to implementation of a removal. Although this Guidance allows considerable flexibility in determining how imminent a threat may be (see Chapter 1.6) to justify a removal, the RPM should consider taking action as an operable unit duly identified during the Scoping, Site Characterization, or Development of Alternatives steps of an RI/FS.

Decisions to implement removals or any part thereof off-post should first receive verbal approval from HQDA through higher headquarters. Verbal requests must be followed up in writing, and a new RCS 1383 must be prepared for USAEC. All decisions to implement removals under CERCLA authority must be explained in a DD. A DD may follow the decision to implement, and even the action itself, depending on the exigency of the situation.

A removal may or may not be the final action for a site. This depends on whether any hazardous substances, pollutants, or contaminants remain after the removal. Removals may include post-action sample collection and analysis to determine whether contamination remains or not. If it is unclear whether contaminants remain or whether they pose a sufficient threat to warrant continued action, an RI/FS may need to be initiated to address those uncertainties.

3.10 MONITORING

Monitoring actions are used to detect whether contaminants exist at a site and, if so, to track the concentrations and spread of contamination from the site. Two types of monitoring (interim and long-term monitoring) are distinguished, primarily by when they occur within the IRP.

The costs of monitoring can be very high depending on the amount and type of samples taken, the analyses performed, and the length of time during which monitoring is conducted. It is suggested that monitoring be conducted for predetermined fixed intervals of time (such as two years). At the end of the monitoring interval, a decision should be made whether to continue the monitoring, modify the monitoring, implement another response action, or implement a Site Closeout decision.

All IRP monitoring programs require a sampling and analysis plan which details the location, frequency, and type of samples to be collected and describes analytical techniques, QA/QC requirements and reporting protocol. This documentation should be provided to local, State and EPA regulatory authorities for review and comment 30 days in advance of implementation. The decision to implement should be the result of consensus among all parties to the extent possible.

3.10.1 Interim Monitoring

Site characterization or field investigations conducted during an RI/FS may detect the migration of hazardous substances at rates or magnitudes that warrant ongoing surveillance. Data from the RI/FS may indicate variability (over time or space) in chemical concentrations which should be verified or explained. Some sites may require more data collection than is ordinarily afforded in an RI/FS in order to adequately characterize the release for planning and design decisions. Such surveillance, performed outside the scope of the RI/FS and prior to implementation of a removal or remedial action, is called interim monitoring.

Interim monitoring should not be conducted at sites for which no migration of hazardous substances has been detected or at sites where releases are suspected of being stable or migrating so slowly that they will not pose a threat to people or environment prior to implementation of the remedial action.

The objective and scope of interim monitoring must be specified on a case-by-case basis. Monitoring solely to satisfy regulatory agency or public curiosity is normally not an adequate justification.

3.10.2 Long-Term Monitoring

Long-term monitoring may be justified in cases where disposal or spillage of hazardous substances has occurred but detected quantities in the soil or groundwater are too low to present a threat to human health or the environment. Uncertainty about future increases in concentration and spread of contamination may need to be addressed by long-term monitoring.

Long-term monitoring should not be implemented because of engineering or regulatory uncertainty. It is appropriate only as a response to uncertainties regarding contaminant release and migration.

Long-term monitoring should not be implemented for terms longer that two years. At the end of a term, monitoring results should be reviewed and a decision made whether to terminate the effort, modify the monitoring procedure, continue for another term, or proceed with a removal or remedial action. If monitoring is terminated and a Site Closeout decision is made, a DD is required.

CHAPTER 4
CONCURRENT REQUIREMENTS

The procedural process for IRP site management was described in Chapter 3. This chapter describes supporting activities that are required to be carried out concurrently (e.g., coordination with regulatory agencies, creation of mechanisms for public involvement, etc.). Responsibilities for preparing concurrent requirement documentation are discussed in Chapter 7.

4.1 SCHEDULES

CERCLA Section 120 establishes specific time intervals for initiating evaluation and cleanup of NPL sites with which the Army must comply throughout implementation of the IRP.

Any installation which is added to the Federal Agency Hazardous Waste Compliance Docket (see Chapter 7.5) must be evaluated by a Preliminary Assessment, and, if releases or potential releases of hazardous substances are discovered, be rated by the HRS2 (see Chapter 6.2.1). Installations may be requested by USEPA to supply information not included in the PA or IIA (such as population density near the site) to facilitate HRS2 scoring. Although such requests for additional information should be coordinated with higher headquarters, the installation should immediately acknowledge to USEPA the receipt of the request and indicate that efforts are underway to obtain the appropriate information.

The Commander and his or her staff should be aware that Section 120 requires compliance with the following schedule requirements for NPL sites:

- An RI/FS shall be initiated within six months of a site's inclusion on the NPL. Initiation of an RI/FS is demonstrated by substantial progress in completing each of the activities listed in Chapter 3.5.1, "RI/FS Scoping."

- An IAG or FFA shall be entered into by the USEPA and the Army within 180 days after the review of the RI/FS. (Note that DoD policy is to begin negotiations on IAGs or FFAs as soon as a site is proposed for the NPL).

- Substantial continuous physical on-site remedial action shall begin at each site not later than 15 months after completion of the RI/FS. This is not a token effort or merely coordination with the contracting officer, but actual implementation such as installation of equipment or construction activity. A schedule for completion of the remedial action will be established in the IAG. Completion shall be as expeditious as practicable.

- RPMs for sites or installations listed on the NPL shall keep a written record of commitments and milestones in IAGs and Decision Documents, and provide updates to the USAEC project officer and the MACOM.

In most instances, one or a few IRP sites cause an installation to be placed on the NPL. The less significant sites on installations that have been listed, and any sites on non-listed installations, will have to be cleaned up if they pose a significant threat to public health, welfare, or the environment. The schedule for responding to non-NPL sites should be appropriate to the nature and severity of the threats they pose.

4.2 COORDINATION WITH REGULATORY AGENCIES

CERCLA requires that all response activities at Federal facilities be coordinated with Federal, State and local authorities in implementing CERCLA and NCP requirements for NPL and non-NPL sites. For all sites, State-defined ARARs, and requirements for notification and public participation, may need to be met.

SARA Section 211 (DERP) paragraph 2705 requires DoD to ensure that the USEPA, natural resource trustees, and appropriate State and local authorities receive prompt notice of the following:

- The discovery of releases or threatened releases of hazardous substances at an installation;
- The extent of the threat to public health and the environment;
- Proposals to carry out response actions; and
- The initiation, including the commencement of each distinct step, of any response action.

DoD is also required to ensure that the USEPA and appropriate State and local authorities have adequate opportunity to participate in the planning and selection of response actions including, but not limited to, review of all applicable data as it becomes available, the development of studies and reports, and review of and comment on response action proposals and activities prior to the initiation of any action. To facilitate this process, a Technical Review Committee or Restoration Advisory Board will be established (see Section 4.3) to review and comment on DoD actions and proposed actions.

If a removal is implemented on an emergency basis because of immediate and substantial endangerment to human health and welfare or the environment, and consultation would be impractical, then the public participation requirement does not apply, but reasonable steps to notify and involve interested agencies should be taken. Removals undertaken *not* on the basis of "immediate and substantial endangerment" *are* subject to the full range of public participation and documentation requirements described in this guidance.

Notifying the USEPA, natural resource trustees, and appropriate State and local authorities of releases, response action proposals and activities, and participation by these authorities in the planning and selection of response actions can be the foundation of successful response decisions

and actions. Because response actions are subject to substantial technical and regulatory uncertainty, it would be beneficial for the Army to try to develop a consensus of opinion with the USEPA, appropriate State and local authorities, and the interested public particularly in regard to the selection of a remedial action. A general agreement by all parties concerned as to the action to be taken at a site could be advantageous in the event that unforeseen problems arise; consensus is likely to encourage cooperation, rather than adversarial reactions to problems.

In addition to reviewing and commenting on Army documents and decisions, States have a role in defining ARARs for both NPL and non-NPL sites. CERCLA Section 121(d) requires that, with stated exceptions, Federal facility remedial actions must comply with these ARARs.

States may play an even greater role at non-NPL sites. CERCLA Section 120(a)(4) specifies that State laws concerning removal and remedial action, including State laws regarding enforcement, shall apply to removal and remedial actions at facilities owned or operated by the Federal government, when such facilities are not included on the NPL. This requirement does not apply if a State law would apply any standard or requirement to a Federal facility that is more stringent than the standards or requirements applied to facilities (in that State) that are not owned or operated by the Federal government. In addition, removal or remedial actions conducted entirely on-site need only comply with the substantive aspects of State laws and not the administrative aspects such as permitting (specifically exempted under CERCLA Section 121(e)) or administrative reviews.

The Army will normally follow the policies and procedures established in CERCLA and this Guidance for non-NPL sites. If a State has additional policies or procedures requirements beyond those contained in the NCP, then higher headquarters should be contacted for guidance prior to taking any action. In most cases, non-NPL sites will be treated in the same manner as NPL sites, except for the following items which are not required for non-NPL sites:

- Schedule requirements beyond the PA/SI;
- USEPA concurrence on remedy selection and establishment of an IAG for remedial actions; and
- ATSDR Health Assessments (described in Section 4.8). [Note: Under CERCLA Section 104(i), a non-NPL site could be subject to the Health Assessment process if a "licensed physician or any individual" petitions the Administrator of ATSDR and the Administrator concurs that a Health Assessment is warranted.]

For installations and sites listed on the NPL, CERCLA Section 120(e)(2) requires that the Army and the USEPA enter into an IAG for the expeditious completion of all necessary remedial actions at a site. Where entire installations are listed, the Army interprets this statutory requirement to apply only to sites that are demonstrated to have caused the problems for which the installation was listed. Section 120(e)(4) specifies that USEPA must concur with the Army's selection of a remedial action for NPL sites. In the event that USEPA does not concur, differences should be resolved as required by the IAG previously negotiated.

The Defense State Memorandum of Agreement (DSMOA)/Cooperative Agreement (CA) program was developed to involve States and Territories in the cleanup of DoD installations through DERP in compliance with Sections 120 and 121 of CERCLA. Section 211(d) allows the Secretary of Defense to enter into agreements with the States, on a reimbursable basis, to support this cleanup effort. Revisions and updates to the program were published in 57 FR 28835, June 29, 1992. A State's role in the Army IRP will be facilitated and clarified by the development of a DSMOA. DSMOAs will specify the conditions under which DoD will reimburse a State for costs of providing services in direct support of DERA-funded activities at DoD installations. The following State services qualify for reimbursement:

- Technical review, comments, and recommendations on all documents or data submitted to the State;
- DSMOA preparation/administration/amendments;
- Identification/review/determination/regulation of ARARs;
- Site visits to review DoD response actions;
- Site visits/split samples;
- Support and assistance in conducting public participation requirements;
- Participation in RABs;
- Preparation and administration of a CA to implement the DSMOA; and
- Independent quality control/quality assurance;
- Additional services that may be set forth in the DSMOA on a state-by-state basis.

A signed DSMOA represents a commitment between the DoD and a State to cooperate in the cleanup programs for specified installations and also establishes the procedural framework for payment. A signed DSMOA, although a prerequisite for reimbursement, is not a funding instrument. A State may seek reimbursement for up to 1% of the DERP expenditures for cleanup at all eligible installations within the State. Reimbursement is available through a CA. State costs at NPL and non-NPL sites will be reimbursed under the CA for the period after October 17, 1986.

DSMOAs are negotiated between DoD and each State for all DoD installations specifically listed in the DSMOA. The DSMOA list of installations should include any for which there is an existing IAG, and payments to states for support services agreed to in existing IAGs should be consolidated in the implementing CA.

DASD(E) [now, DUSD(ES)] has designated the Chief of Engineers as executive agent for the DSMOA/CA program (Memo, dated 7 Feb 90). A notice of fund availability and application instructions for DSMOAs was published in the Federal Register (54(144): 31358) on 25 July 1989.

The Installation Commander, as the responsible official for site actions on the installation, will be kept well informed of all negotiations and agreements with regulatory agencies concerning IRP sites. If a problem develops in coordination with regulatory agencies, the IC or his/her representative should become directly involved in order to prevent or alleviate any possible complications that could lead to adverse impacts to the installation or its mission.

4.3 PUBLIC PARTICIPATION

Public participation activities are intended to promote active communication between communities which may be affected by releases of hazardous substances and the agency responsible for response actions. The overall objectives are to collect information about the community in which the site is located, present citizens with the opportunity to comment on and provide input to technical response decisions, supply the public with accurate and timely information regarding planned or on-going actions and progress, and to focus and resolve conflict.

It is Army policy to keep the public fully informed of IRP activities (AR 200-1, AR 200-2, AR 360-5, AR 360-61, and AR 360-81). Army Public Affairs Officers should work closely with Installation Commanders, concerned installation offices, other Army elements, USEPA, and State agencies to define specific strategies for handling potential public and media interests at the program onset, and to ensure that appropriate public affairs activities are jointly executed with each step of the IRP. An organized approach to community relations at the local level is required to keep community leaders, local government officials, including appropriate members of Congress, and affected citizens informed and allow them to provide feedback to installation officials. Specific guidance regarding the development and implementation of the public participation requirements of CERCLA and the NCP can be found in the Commander's Guide to Public Involvement in the Army's Installation Restoration Program (USATHAMA, 1990) and in USEPA's guidebook, "Community Relations in Superfund: A Handbook (Jan. 92)". Figure 4-1 shows the relationship of Community Relations activities to CERCLA technical activities.

Public participation activities are initiated by the RI/FS Scoping step of the remedial action process. During this step, the following activities are undertaken:

- Establish a Technical Review Committee, as required by SARA Section 211, paragraph 2705, to facilitate review and comment on response actions and proposed actions at Army installations. The Army will establish TRCs for all installations which have ongoing IRP response actions beyond the PA/SI stage. Exceptions based on national security, lack of regulatory agency or public interest, or the urgency of completing response actions should be requested through higher headquarters.

  At installations where there is sufficient, sustained community interest, a Restoration Advisory Board will be established. Criteria for determining sufficient interest are:

  - A local government requests that a RAB be formed, or
  - Fifty local residents sign a petition requesting that a RAB be formed, or
  - An installation determines that a RAB is needed.

  Where a TRC or other similar group already exists in such cases, a separate RAB should not be created; rather, the TRC or similar group should be expanded or

modified to become a RAB. Expansions/modifications shall include: (i) adding additional community representatives (10 - 12 total), (ii) adding a community co-chair, and (iii) making meetings open to the public. Members of the TRC/RAB shall include Army and USEPA officials, State and local authorities, and public representative(s) of the potentially affected community. Avenues to select public representative(s) for the TRC include, but are not limited to, issuance of news releases, and phone calls or letters of invitations to known interested parties. To ensure that a RAB reflects the diverse interests within the community, components should request that regulatory agencies develop a list of citizen nominees and accept that list unless it is unbalanced. The Army will conduct the membership selection process in an open manner. [A fuller discussion of the RAB may be found in Appendix E, the "Fiscal Year 1994/1995 Defense Environmental Restoration Program Management Guidance".]

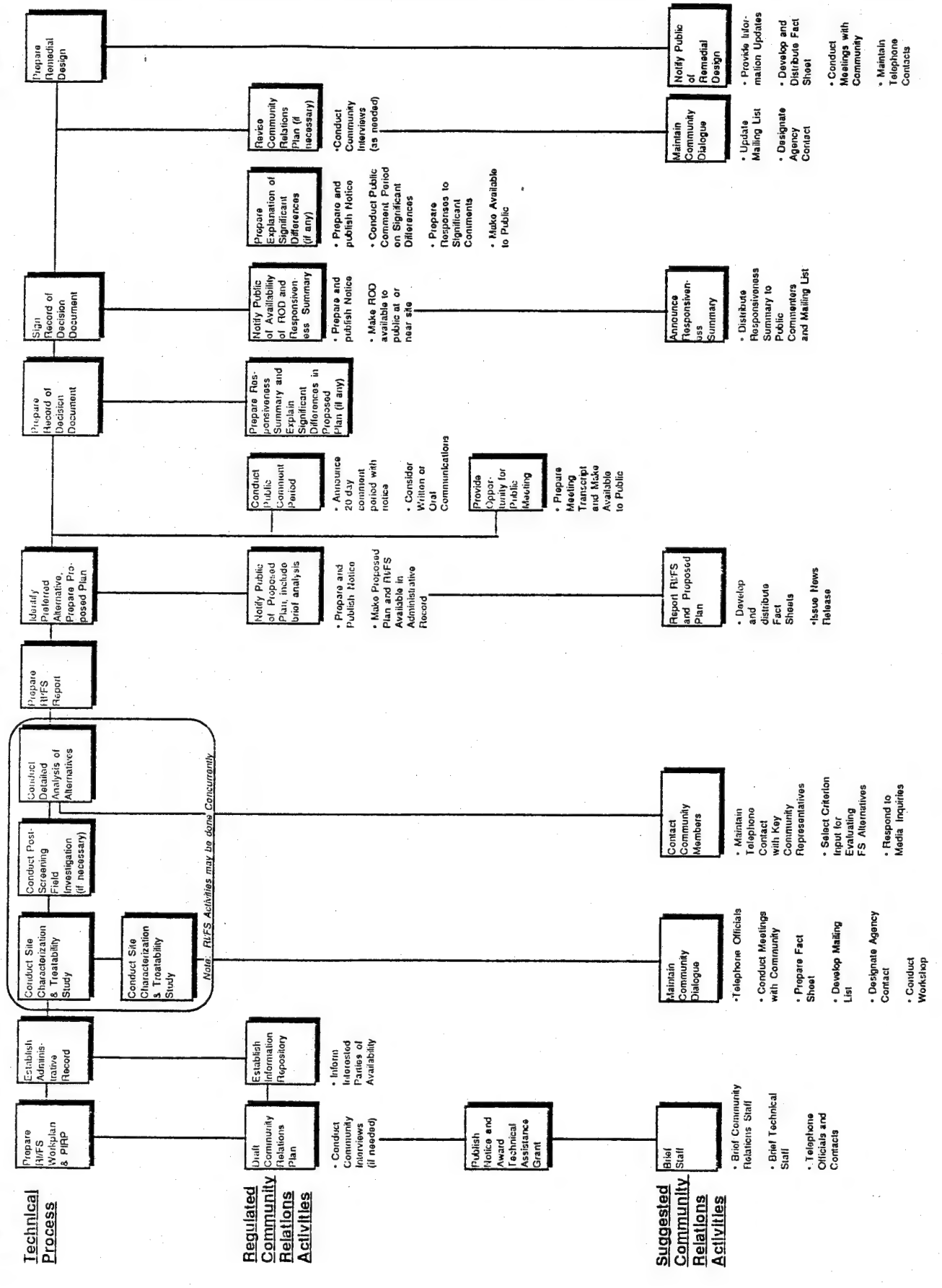
- Acquire and review background information regarding the site and factors that could influence public perceptions of the contamination problem (e.g., proximity to residences or schools, location of public water supply and migration potential).

- Identify target audiences, key community leaders (local government officials, including appropriate members of Congress), citizen groups, interested citizens, and news media representatives. Identification of these groups is particularly important if the size of installation's local community is such that it is not possible to interview all interested people. [Note: Mailing lists of elected officials should be reviewed and updated after each Federal, State or local election.]

- Conduct interviews or workshops with local officials, community residents, public interest groups, and other interested or affected parties to solicit their concerns and information needs, and to learn how and when citizens would like to be involved in the response process. Interview questions could be derived from USEPA's guidebook, Community Relations in Superfund: A Handbook, Jan. 92.

- Prepare a formal Community Relations Plan based on the research conducted and community interviews, specifying the public involvement activities that the Army expects to undertake during the response, and include the CRP with the RI/FS Work Plan. Basic elements of the CRP should include: (i) site background; (ii) environmental history; (iii) the community interview program; (iv) community concerns; (v) the planned public involvement program; and (vi) a list of media and civic/community groups.

Figure 4-1: Relationship of Community Relations Activities to CERCLA Activities



The public is afforded the opportunity to review and comment on the Draft Feasibility Study. Section 117 of CERCLA specifies that the following actions shall be taken in conjunction with the adoption of any plan for remedial action:

- Prepare a brief analysis ("Proposed Plan") of the Draft FS. The analysis should identify the site, sites, or operable units being addressed; summarize the problem that the proposed action is intended to remedy; review the alternatives that were considered; identify the preferred alternative and how it was rated by the evaluation criteria; and explain how the public may participate in the process. The Proposed Plan may be presented as a fact sheet or as a stand-alone document depending on the complexity of the proposed action. See USEPA guidance on preparing Proposed Plans and Records of Decision (USEPA, July 1989).

- Prepare and publish in a major local newspaper of general circulation a notice of availability of the Draft FS and the Proposed Plan. The notice of availability should state that the FS complies with the AR 200-1 requirement in accordance with 40 CFR 1500 and satisfies the intent of the National Environmental Policy Act of 1969.

- Provide a reasonable time period, of not less than 30 calendar days, for submission of written and oral comments.

- Present an opportunity for a public meeting/availability session at or near the installation, prepare a transcript of the meeting, and make a copy of the transcript available to the public in the information repositories and administrative record.

- Prepare a responsiveness summary which addresses each of the significant written and oral comments on the FS and Proposed Plan. This summary becomes a part of the Decision Document or Record of Decision. A notice of availability of the DD or ROD shall be published prior to the commencement of any remedial action. The DD or ROD shall be accompanied by a discussion of any significant changes (and the reasons for such changes) made to the Draft FS.

- Prepare a fact sheet detailing the remedial design and, as appropriate, provide a public briefing/availability session prior to initiating the remedial action.

- Provide the opportunity for public inspection and copying, at or near the installation, of each item developed, received, published, or made available to the public. The information repositories should contain copies of all final technical documents, as well as news releases, fact sheets, and other summarized information of interest to the public (see Chapter 7.2).

In addition, notice of availability of an IAG (for NPL sites) and the remedial design shall be made upon the completion of these documents. The CRP may have to be revised at the beginning of the Remedial Design step to address community concerns not addressed in the

original CRP, but anticipated during remedial design or remedial action.

Requirements for removals differ in some respects from those described for remedial actions. The short duration and often emergency nature of removals dictate the accurate and swift spread of information. Section 300.415(m) of the NCP provides for the rapid dissemination of information by specifying that the following activities be undertaken for all removals:

- Designate a spokesperson to inform the community of actions taken, respond to inquiries, and provide information concerning the release.

- Notify the public, including at a minimum immediately affected citizens, State and local officials, and when appropriate, civil defense or emergency management agencies, through the spokesperson, of the nature of the situation and the actions underway to mitigate any damage.

- Coordinate with higher headquarters and the appropriate agencies on all news releases or statements made by participating Federal agencies. Clearance procedures for release of information are contained in AR 360-5 (Department of the Army, 1986).

When an action is an emergency removal taken because of immediate and substantial endangerment to human health or the environment, and consultation would be impractical, then the CRP and public review and comment requirements will not strictly apply, although the public should be informed of actions taken.

In cases where on-site removal is expected to extend beyond 120 days from the initiation of the action, then the community interviews, CRP, and information repository requirements associated with remedial actions will apply and should be accomplished within 120 days of the initiation of action. Where there is a planning period of at least six months prior to the initiation of a removal, then the comment period and response requirements will also apply.

Under Army and USEPA guidance, a CRP must be prepared for all remedial actions and any removals where time permits, as previously discussed. CRPs provide a written summary of the concerns identified during the community interviews along with a detailed description of the community relations program designed on the basis of these interviews and other research. CRPs should focus on site-specific community relations techniques and approaches and avoid discussion of generic program goals. Army guidance on CRPs can be found in the Commander's Guide to Public Involvement in the Army's Installation Restoration Program (USATHAMA, 1990). Additional guidance regarding CRP preparation and recommended format can be found in Community Relations in Superfund: A Guidance (USEPA, June 1988) and Innovative Methods to Increase Public Involvement in Superfund Community Relations, Superfund Management Review Resource, #43.A (USEPA, November 1990).

The Installation Commander should be involved in public participation activities. As the official directly responsible for all IRP activities on the installation, he/she can best demonstrate the

Army's willingness to listen to and address community concerns. The Commander's involvement can be particularly important in the event that unanticipated developments occur, since he/she has the authority to commit resources (personnel and materials) to ensure that the public is informed.

4.4 WORKER HEALTH AND SAFETY

Protecting the health and safety of the investigative team and of the general public is a major concern during the response action activities. Workers may be exposed to a variety of physical, chemical, and biological hazards including toxic chemicals, biological agents, radioactive materials, heat or other physical stresses, equipment-related injuries and fires, or explosions. The surrounding community may be at increased risk from unanticipated chemical releases, fires or explosions created by on-site activities. In recognition of these concerns, Section 126(e) of SARA directed the Occupational Safety and Health Administration (OSHA) to issue a rule that contains employee protection requirements for workers engaged in hazardous waste operations. OSHA's final rule (29 CFR 1910.120) was published in the Federal Register on March 6, 1989. The OSHA rule specifies that a program for occupational safety and health be made available for the protection of workers at a response site. Three components define the policies and procedures by which the Health and Safety Program is implemented: (1) preparation of a Site Health and Safety Plan; (2) site briefings; and (3) site inspections.

The Site Health and Safety Plan should be prepared prior to SI, RI, and RA field activities concurrently with the Sampling and Analysis Plan (discussed below in Section 4.5). In accordance with 29 CFR 1910.120(i)(2), each Site Health and Safety Plan should include, at a minimum, the following 11 elements:

- The name of a Site Health and Safety Officer and the names of key personnel and alternates responsible for site safety and health;
- A safety and health risk analysis for existing site conditions, and for each site task and operation;
- Employee training assignments;
- A description of personal protective equipment to be used by employees for each of the site tasks and operations being conducted;
- Medical surveillance requirements;
- A description of the frequency and types of air monitoring, personnel monitoring, and environmental sampling techniques and instrumentation to be used;
- Site control measures;
- Decontamination procedures;

- Standard Operating Procedures for handling, transporting, labeling, and disposing of hazardous wastes at the site;

- A contingency plan that meets the requirements of 29 CFR 1910.120(1)(1) and (1)(2); and

- Entry procedures for confined spaces.

The second component of the Health and Safety Program specifies that a safety briefing will be held prior to initiating any site activity and at such other times as necessary to ensure that employees are appraised of site hazards and provisions of the Site Health and Safety Plan, and to ensure that the plan is being followed.

The final component of the Health and Safety Program is site auditing to evaluate compliance with, and effectiveness of, the Site Health and Safety Plan. The Site Health and Safety Officer shall carry out the inspections.

Additional guidance regarding worker health and safety can be found in AR 385-10, The Army Safety Program (Department of the Army, May, 1988), Health and Safety Requirements for Employees Engaged in Field Activities (USEPA, July 1981), Standard Operating Safety Guides (USEPA, 1984), and Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (NIOSH/OSHA/USCG/USEPA, October 1985).

4.5 DATA QUALITY OBJECTIVES

Data quality objectives (DQOs) are quantitative and qualitative statements specified to ensure that data of appropriate quality are collected during IRP field activities. DQOs are developed prior to data collection and should be specified for all data collection activities that take place during SI, RI, post-project monitoring, and when additional data needs are identified during the FS, RD, or RA.

Guidance regarding the DQO development process can be found in Data Quality Objectives for Remedial Response Activities: Development Process; and Example Scenario: RI/FS Activities at a Site with Contaminated Soils and Ground Water (USEPA, March 1987).

To ensure that DQOs can be attained, the location and number of samples must yield data that adequately represent the site and are statistically significant. Guidance may be found in "Soil Sampling Quality Assurance User's Guide" (EPA/600/8-89/046; Methods for Evaluating Solid Waste - Volume II: Field Manual, Physical/Chemical Methods, 3rd Ed., SW-846; and Supplemental Guidance to RAGS: Calculating the Concentration Term, Publication 9285.7-081.

DQOs are incorporated into the Sampling and Analysis Plan (SAP) and should be continually reviewed, reevaluated, and revised as needed based upon the results of each data collection activity.

A Sampling and Analysis Plan consists of two parts:

1. A Quality Assurance Program Plan (QAPP) that describes the policy, organization, functional activities, and quality assurance and control protocols necessary to achieve DQOs, and

2. A Field Sampling Plan (FSP) that provides guidance for all fieldwork by defining in detail the sampling and data-gathering methods to be used on a project.

Table 4-1 lists the elements that should be contained in a QAPP and an FSP. Guidance regarding QAPP preparation can be found in Interim Guidelines and Specifications for Preparing Quality Assurance Program Plans (USEPA, 1980) and Quality Assurance/Quality Control Guidance for Removal Activities: Sampling QA/QC Plan and Data Validation Procedure, Interim Final (USEPA, April 1990). Guidance regarding the selection and definition of field methods, sampling procedures, and custody can be found in the Compendium of Superfund Field Operations Method (USEPA, September 1987).

The purpose of a SAP is to ensure that sampling activities will be comparable to and compatible with previous activities performed at a site while providing a mechanism for planning field activities. The plan also serves as a basis for estimating costs of field efforts. A SAP is prepared for all field activities. Initial preparation takes place before any field activities begin, but the SAP may be amended or revised as the need for field activities is reassessed and rescoped.

TABLE 4-1 ELEMENTS OF A QUALITY ASSURANCE PROGRAM PLAN AND A FIELD SAMPLING PLAN

A QAPP should contain the following 14 elements:

- Project Description
- Project Organization and Responsibilities
- Quality Assurance Objectives for Measurement
- Sampling Procedures
- Sample Custody Procedures
- Calibration Procedures
- Analytical Procedures
- Data Reduction, Validation, and Reporting
- Internal Quality Control
- Performance and System Audits
- Preventive Maintenance
- Data Assessment Procedures
- Corrective Actions
- Quality Assurance Reports

* It is important to note that the information required for each of the elements listed above need not be generated each time a QAPP is prepared. Only site-specific aspects of a QAPP need to be explicitly described. If this information is already contained in another document, it need only to be referenced in the QAPP.

An FSP should consist of the following six elements:

- Site Background
- Sampling Objectives
- Sampling Location and Frequency
- Sample Designation
- Sampling Equipment and Procedures
- Sample Handling and Analysis

4.6 APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARs)

Section 121(d)(2)(4) of CERCLA specifies that Federal facility remedial actions shall comply with and upon completion attain:

- Any Federal requirements.
- Any State promulgated requirements more stringent than Federal requirements that are legally applicable or relevant and appropriate to the hazardous substance, remedial action, location, or other circumstances at the site. Requirements may be either applicable, or relevant and appropriate to a remedial action, but not both.
- Applicable requirements are those cleanup standards, standards of control and other substantive environmental protection requirements, criteria or limitations promulgated under Federal or State law that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstances at a site. If it is determined that a requirement is not applicable to a specific release, then the requirement shall be examined to determine if it is relevant and appropriate to the circumstances of the release.
- Relevant and appropriate requirements are those cleanup standards, standards of control and other substantive environmental protection requirements, criteria or limitations promulgated under Federal or State law that, while not applicable to a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstances at a site, nonetheless address problems or situations sufficiently similar to those encountered at the site that their use is well suited to the particular site.

To determine whether a requirement is relevant and appropriate, the following criteria shall be weighed:

- Whether the objectives of the statute and regulations under which their requirement was created are similar to the specific objectives of the CERCLA action;
- Whether the media regulated or affected by the requirement are similar to the media contaminated or affected at the CERCLA site;
- Whether the substances regulated by the requirement are similar to the substances found at the CERCLA site;
- Whether any variances, waivers, or exemptions of the requirement are available for the circumstances of the CERCLA site or CERCLA action;

- Whether the type of place regulated is similar to the type of place affected by the CERCLA site or CERCLA action;

- Whether the type of structure or facility regulated is similar to the type of structure or facility affected by the release or contemplated by the CERCLA action;

- Whether any consideration of use or potential use of affected resources in the requirement is similar to the use or potential use of the affected resource; and

- Whether the purpose of the requirement in the program of its origin is served by its application at the CERCLA site.

A requirement that is relevant and appropriate must be complied with to the same degree as if it were applicable. However, there is more discretion in this determination, for it is possible for only part of a requirement to be considered relevant and appropriate, the rest being dismissed if judged not to be relevant and appropriate in a given case.

To be considered requirements (TBCRs) are non-promulgated advisories (such as reference doses or potency factors), criteria, and guidance issued by Federal and State governments. TBCRs do not have the status of ARARs. However, Section 300.400(g)(3) of the NCP specifies that TBCRs shall be identified as appropriate to supplement ARARs where ARARs do not exist, or where ARARs have been determined to be insufficient to ensure protection of human health and environment at that particular release.

ARARs may be categorized as contaminant-, location-, or action-specific:

- Contaminant-specific ARARs set health or risk-based concentration limits or ranges in various environmental media for specific hazardous substances, pollutants, or contaminants. Examples: maximum contaminant levels, Federal Water Quality Criteria, National Ambient Air Quality Standards, RCRA Groundwater Protection Standards.

- Location-specific ARARs set restrictions on activities within specific locations, such as wetlands and floodplains, and depend on the characteristics of a site and its immediate environs. Examples: Federal and State siting laws for hazardous waste facilities, sites on the National Register of Historic Places.

- Action-specific ARARs set controls or restrictions on particular kinds of remedial activities that may be selected to accomplish a remedy. These ARARs may specify particular performance levels, actions, or technologies to be used to manage hazardous substances, pollutants, or contaminants. Examples: RCRA regulations for closure of hazardous waste storage or disposal units, RCRA incineration standards.

Remedial actions conducted entirely on-site need only comply with the substantive aspects of ARARs and not the administrative aspects such as permitting (specifically exempted under CERCLA Section 121(e)) or administrative reviews. Administrative procedures are not considered ARARs and, therefore, need not be pursued during the planning or implementation of remedial actions.

Additional guidance on identifying and complying with ARARs can be found in CERCLA Compliance with Other Laws Manual: Interim Final Part I) (USEPA, August 1988) and Part II (USEPA, August 1989).

In order to avoid inordinate delay or duplication of effort, the Army (i.e., members of the TRC/RAB, installation personnel, USAEC, and the executor) should work closely with the USEPA and the States to ensure that each is notified of the requirements the others have determined to be applicable or relevant and appropriate, and to ensure that appropriate ARARs are identified and considered at critical steps in the remedial planning process as outlined in Table 4-2. The Army should negotiate with the USEPA and the State to resolve any differences of opinion regarding Federal or State ARARs.

TABLE 4-2
ARMY AND STATE ROLES IN IDENTIFYING AND COMPLYING WITH ARARS

STEP	ARMY	STATE
RI/FS Scoping	Identify preliminary contaminant and location-specific ARARs. Initiate communications to facilitate identification of State ARARs.	State requested to provide preliminary contaminant and location-specific ARARS within 30 days of receipt of request (NCP, Section 300.515(g)(2)) or within the time period specified in the IAG (for NPL sites).
Site Characterization	Review Federal contaminant and location-specific ARARS and TBCRs.	State requested to verify contaminant and location-specific ARARS and TBCRs.
Screen Alternatives	Identify action-specific ARARs for each proposed alternative.	State requested to identify action-specific ARARs for alternatives that passed through screening process within 30 days of request, or as specified in the IAG (for NPL sites).
Detailed Analysis of Alternatives	All ARARs and TBCRs for each alternative are examined as a package to determine what is needed to comply with other laws and to be protective.	State requested to certify identification of action-specific ARARs.
Selection of Remedy	Selected alternative must be able to attain all Federal and State ARARs unless statutory waivers are invoked.	-----
Remedial Design	Ensure that technical specifications of construction attain ARARs.	State consulted to ensure that all identified ARARs are updated as needed.

A remedial action must attain all Federal and State ARARs upon completion unless one of the following waivers is found is to be applicable under CERCLA Section 121(d)(4)(a-f) or Section 300.430(f)(1)(ii)(C) of the NCP:

- The action selected is only part of a total remedial action that will attain the ARAR when completed;
- Compliance with the ARAR at the site will result in greater risk to human health and the environment than alternative options;
- Compliance with the ARAR is technically impractical from an engineering perspective;
- The remedial action selected will attain a standard of performance that is equivalent to that required under the otherwise applicable requirement through use of another method or approach; or
- For State ARARs, when the State has not consistently applied (or demonstrated the intention to consistently apply) the ARAR in similar circumstances at other remedial actions within the State.

CERCLA Section 121(f)(3)(a) requires that at least 30 days prior to the publication of the ROD, if an ARAR is waived for a proposed remedial action, then the Army shall provide an opportunity for the State to concur or not concur with the proposed remedial action. If the State concurs, or does not act within 30 days, the remedial action may proceed. If the State does not concur with the remedial action selected and desires to have the remedial action conform to the ARAR, the State may bring an action in U.S. District Court within 30 days of notification for the sole purpose of determining whether the remedial action selected is supported by substantial evidence.

Removals shall, to the greatest extent practicable considering the emergency nature of the situation, attain or exceed Federal and State ARARs. Waivers from attaining Federal and State ARARs as previously discussed in this section, may be used, where applicable, for removals. In cases where the attainment of ARARs is not practicable, documentation must be produced that explains why the removal precludes the attainment of all ARARs. TBCRs shall be considered in formulating the removal, as appropriate and where necessary to be protective.

4.7 HUMAN HEALTH EVALUATIONS

Any risk assessment that considers human health, such as Public Health Evaluations for an RI/FS, will require approval by the U.S. Army Surgeon General. The executing agency should coordinate such assessments with the U.S. Army Environmental Hygiene Agency through normal command channels.

A human health evaluation consists of three key elements:

- A Baseline Risk Assessment,
- Refinement of preliminary remediation goals, and
- Remedial alternatives risk evaluation

The Baseline Risk Assessment should be prepared as an integral part of the Site Characterization step in an RI/FS. Continuation of the RI/FS is contingent upon findings in the Baseline Risk Assessment that releases create substantial threats to human health or the environment.

Baseline Risk Assessments are an evaluation of the potential threat to human health and the environment in the absence of any remedial action. The information developed in the Baseline Risk Assessment provides the basis for:

- Determining whether or not remedial action is necessary;
- Modifying preliminary remediation goals;
- Developing and evaluating remedial action alternatives;
- Justifying the implementation of a remedial action;
- Satisfying the NCP requirement to complete a detailed analysis of the no action alternative, including potential human health impacts; and
- Focusing on the contamination problem associated with the site.

The Baseline Risk Assessment process has both a human health component, described here, and an environmental evaluation component, addressed in Section 4.9. The human health component of the Baseline Risk Assessment process includes four steps:

- Data Collection and Evaluation;
- Exposure Assessment;
- Toxicity Assessment; and
- Risk Characterization.

Data collection and evaluation involves gathering and analyzing the site data relevant to the human health evaluation and identifying the substances present at the site that are the focus of the risk assessment process.

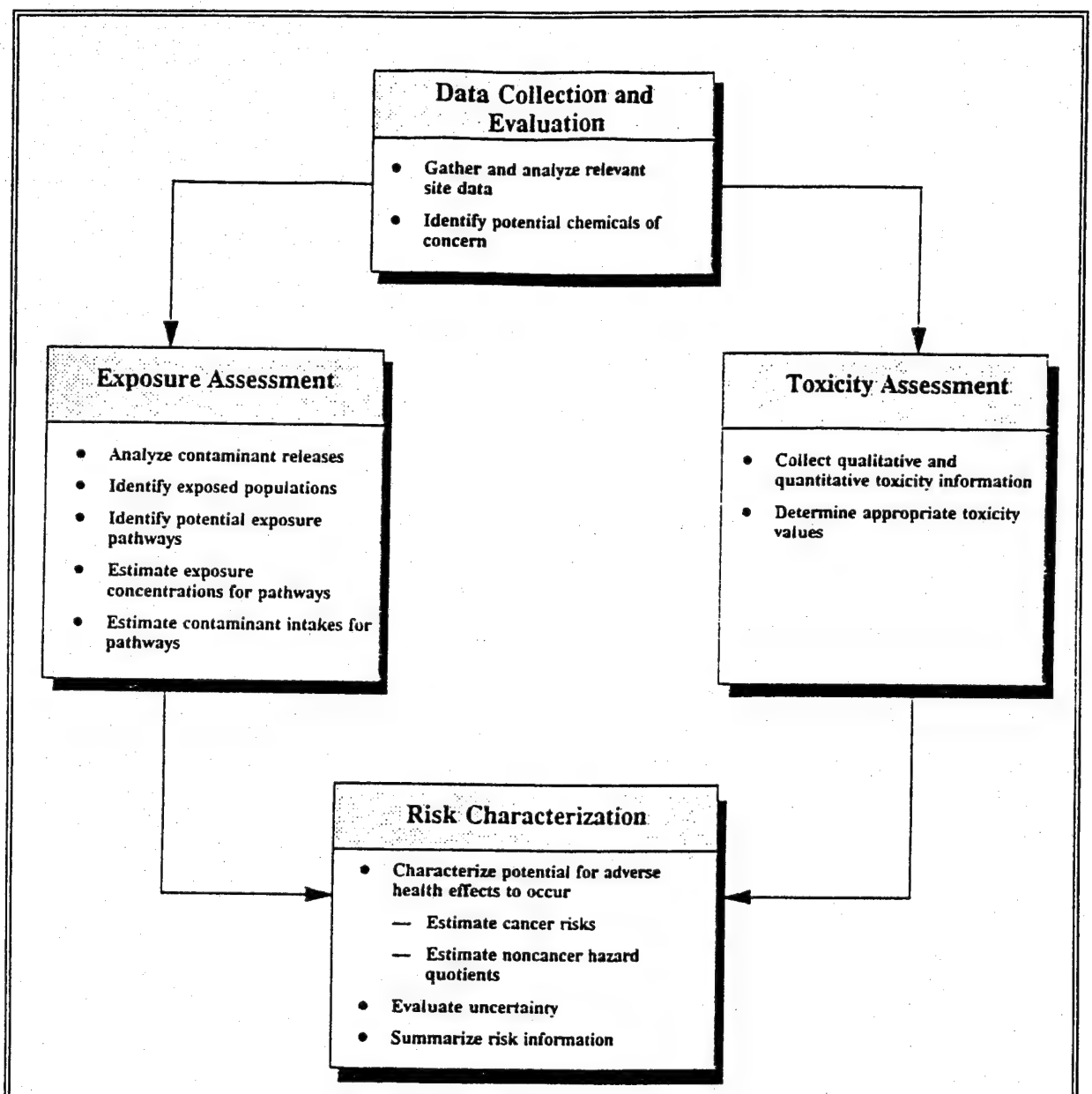
An exposure assessment is conducted to estimate the magnitude of actual and/or potential human exposures, the frequency and duration of these exposures, and the pathways by which humans are potentially exposed. In the exposure assessment, reasonable maximum estimates of exposure

are developed for both current and future land-use assumptions. Current exposure estimates are used to determine whether a threat exists based on existing exposure conditions at the site. Future exposure estimates are used to provide decision-makers with an understanding of potential future exposures and threats and include a qualitative estimate of the likelihood of such exposures occurring. Conducting an exposure assessment involves analyzing contaminant releases; identifying exposed populations; identifying all potential pathways of exposure; estimating exposure point concentrations for specific pathways, based both on environmental monitoring data and predictive chemical modeling results; and estimating contaminant intakes for specific pathways. The results of this assessment are pathway-specific intakes for current and future exposures to individual substances. [Supplemental references for exposure assessments are the Superfund Exposure Assessment Manual (USEPA, 1988), the Exposure Factors Handbook (USEPA, 1989), and Exposure Assessment Methods Handbook (USEPA, 1989).]

The toxicity assessment step of baseline risk assessment considers: (1) the types of adverse health effects associated with chemical exposures; (2) the relationship between magnitude of exposure and adverse effects; and (3) related uncertainties such as the weight of evidence of a particular chemical's carcinogenicity in humans. Typically, risk assessments rely heavily on existing toxicity information developed on specific chemicals. Toxicity assessment for contaminants is generally accomplished in two steps: hazard identification and dose-response assessment. The first step, hazard identification, is the process of determining whether exposure to an agent can cause an increase in the incidence of an adverse health effect (e.g., cancer, birth defect). Hazard identification also involves characterizing the nature and strength of the evidence of causation. The second step, dose-response evaluation, is the process of quantitatively evaluating the toxicity information and characterizing the relationship between the dose of the contaminant administered or received and the incidence of adverse health effects in the exposed population. From this quantitative dose-response relationship, toxicity values are derived that can be used to estimate the incidence of adverse effects occurring in humans at different exposure levels.

The risk characterization summarizes and combines outputs of the exposure and toxicity assessments to characterize baseline risk, both in quantitative expressions and qualitative statements. During risk characterization, chemical-specific toxicity information is compared against both measured contaminant exposure levels and those levels predicted through fate and transport modeling to determine whether current or future levels at or near the site are of potential concern.

Volume 1, Part A of the Risk Assessment Guidance provides additional guidance on performing these steps. Their interrelationships are illustrated in Figure 4-2.



Source: Risk Assessment Guidance for Superfund, Volume 1, Human Health Evaluation Manual (USEPA, December, 1989)

FIGURE 4-2. STEPS IN THE HUMAN HEALTH COMPONENT OF THE BASELINE RISK ASSESSMENT PROCESS

The results of the Baseline Risk Assessment may indicate that the site does not pose an actual or potential threat to human health or the environment. In these cases, the RI/FS will be terminated, and this decision will be documented in accordance with the discussion of Decision Documents in Chapter 7.3 of this guidance.

Refinement of preliminary remediation goals is the second element of a public health evaluation. These goals are based on risk assessment and chemical-specific ARARs, and are developed by:

- Identifying chemical-specific ARARs;
- Identifying levels based on risk assessment where chemical-specific ARARs are not available or situations where multiple contaminants or multiple exposure pathways make ARARs not protective;
- Identifying non-substance-specific goals for exposure pathways (if necessary); and
- Determining a refined preliminary remediation goal that is protective of human health for all substance/exposure pathway combinations being addressed.

Volume 1, Part B of USEPA's Risk Assessment Guidance for Superfund, in preparation, will provide detailed guidance on refining preliminary remediation goals.

The baseline risk assessment and refinement of preliminary remediation goals generally are performed in conjunction with the site characterization step of the RI/FS. The third element of the public health evaluation, remedial alternatives risk evaluation, is an integral part of the detailed analysis of alternatives step. Risk information is used to evaluate each alternative by four of the nine criteria applied to selection of the final remedy. These four criteria are:

- Overall protection of human health and the environment;
- Compliance with ARARs;
- Long-term effectiveness and performance; and
- Short-term effectiveness.

Volume 1, Part C of USEPA's Risk Assessment Guidance for Superfund, in preparation, will provide detailed guidance on remedial alternatives risk evaluation.

4.8 HEALTH ASSESSMENTS

Under CERCLA Section 104(j)(6)(a), the ATSDR is required to conduct Health Assessments for sites listed on the NPL. ATSDR may also perform Health Assessments, under CERCLA Section 104(j)(6)(b), for sites where individuals have been exposed to a hazardous substance for which the probable source of the exposure is a CERCLA release. Further, under CERCLA Section 104(i), ATSDR may perform Health Assessments for non-NPL sites if requested by "a licensed physician or any individual." Health Assessments are based on SI, RI, and public health

evaluation data and studies submitted to ATSDR. Exchanges of information and reports with ATSDR will be coordinated through USAEHA.

DoD has entered into a Memorandum of Understanding (MOU) with ATSDR that delineates the responsibilities and procedures under which ATSDR and DoD will conduct Health Assessments. (Refer to DoD-ATSDR Memorandum of Understanding (MOU) (DUSD(ES), 14 June 1993, which revised the initial MOU of 6 October 1989). The revised MOU is the single document governing the relationship between DoD and ATSDR. Supplemental DoD Component-specific IAGs governing Health Assessments are no longer necessary. DASA(ESOH) is the Lead Agent for the program; USAEHA serves DASA(ESOH) as the program steward. Additional information can be found in Guidance for Coordinating ATSDR Health Assessment Activities with the Superfund Remedial Process (USEPA, 11 March 1987).

The purpose of a Health Assessment is to assist in determining whether action to reduce human exposure to hazardous substances at a site should be taken, and if additional information on human exposure and associated risks is needed. At the completion of each Health Assessment, the ATSDR will provide the Army with the results of the assessment, together with any of the following recommendations for further actions:

- Take action as necessary to reduce human exposure and eliminate or substantially mitigate the risks to human health; such action may include, but is not limited to:
  - Provision of alternate water supplies;
  - Permanent or temporary relocation of individuals; and
  - Removals.
- Conduct epidemiological studies as necessary to determine the health effects on the population exposed to hazardous substances from a release or threatened release. These studies may require door-to-door solicitation of information.
- Establish a registry of exposed persons, taking into account the circumstances bearing on the usefulness of such a registry including the seriousness or unique character of identified diseases and the likelihood of population migration from the affected area. If population migration out of the area is likely, then exposed persons will need to be tracked.
- Establish a health surveillance program that will include, but not be limited to:
  - Periodic medical testing of population subgroups to screen for diseases for which the subgroup is at significant increased risk, and
  - Development of a mechanism to refer for treatment those individuals within the subgroup that are screened positive for such diseases.

The consequences of these actions can be dramatic in terms of public reaction. Therefore, the

Army Environmental Hygiene Agency will keep the Installation Commander well informed of progress during preparation of the Health Assessment to enable the IC to respond knowledgeably and effectively to public concern regarding exposure risks. The Installation Commander will be responsible for distribution of the completed Health Assessment or any interim reports to regulatory agencies and the public. The RPM will normally distribute Health Assessment reports to Army offices.

4.9 NEPA COMPLIANCE

The Installation Commander will incorporate the intent of NEPA into IRP project planning and activities, reports, DDs, and public involvement planning to ensure that the project does not negatively affect the environment. Based on the advice of the Department of Justice, it is the position of the United States that, as a matter of law, NEPA is inapplicable to CERCLA action. NEPA values are integrated into the CERCLA RI/FS process, which is comprehensive and contains an environmental analysis that is virtually identical to that found in an Environmental Impact Statement (EIS). Because NEPA is not applicable to the CERCLA process as a matter of law, any specific integration of NEPA into an agency's CERCLA process is done as a matter of agency policy, not statutory requirement.

Evaluation of the environmental effects of chemical releases from hazardous waste sites is a component of baseline risk assessments, normally prepared as part of the site characterization step of an RI/FS. Both the human health and environmental risks posed by a site are considered in decisions on the need for and goals of subsequent response actions. Guidance for evaluating environmental effects of releases is provided in Risk Assessment Guidance for Superfund, Volume II, Environmental Evaluation Manual (USEPA, 1989). Detailed methods for measuring environmental effects are reviewed in Ecological Assessment of Hazardous Waste Sites: A Field and Laboratory Reference (USEPA, March, 1989).

CHAPTER 5
CONTRACTING

This chapter describes general procedures for implementing and managing the IRP contractually. Specific procedures and requirements of contracting offices may vary, and the role of the RPM may vary depending upon the extent to which the installation manages its IRP. Generally, however, it is the RPM's responsibility to:

- Arrange for procurement of a technical support contractor in a manner fully consistent with all existing acquisition regulations and guidelines;
- Ensure that contract specifications are complete and accurate in order to fulfill the government's needs;
- Provide technical oversight and guidance to the contractor to ensure that work products fulfill the highest standards of professional quality; and
- Monitor the contractor's compliance with all terms and conditions of the contract to ensure that government resources are reported and expended appropriately.

It is important to remember that authority to formulate and administer contracts is held only by Contracting Officers (KOs). A Project Officer (PO) in coordination with the KO develops the Procurement Request (PR) and a Contracting Officer's Representative (COR) guides and monitors the contractor's performance. In practice the PO and the COR may be the same person. Throughout this chapter, the PO and COR will be treated as though they were the same person, and this Guidance will address COR duties presuming that person both prepared the PR and manages the contract task(s). The RPM may be assigned by the KO to serve as the PO/COR.

Potential CORs are reminded that their authorities for working with contractors are only those delegated in a Letter of Designation issued by the KO after contract award. The KO is the only person authorized to sign, modify, or terminate a contract. Therefore, even though the RPM is the director and decision-maker for IRP response activities and may be designated to be the COR, the RPM's role in controlling contract activities is limited. RPMs should coordinate closely with KOs regarding the incorporation of specific authorities in the Letter of Designation.

At the same time, the RPM may have some discretion in selecting a contracting office to manage the project's contracts. In general, a contracting office having experience with research and development type contracts and architectural/engineering service contracts would be preferred.

5.1 COR DUTIES AND TASKS

The information that follows summarizes basic concepts in procurement as they apply to the IRP.

5.1.1 The COR and the KO

The COR will develop a PR to justify securing contractual services and may participate in a variety of functions both before and after award. In the majority of cases, the COR's role is limited to preparing the PR and subsequent monitoring of contractor performance. In certain procurements, however, the COR may perform multiple functions to:

- Plan for the contract;
- Coordinate with support specialists;
- Prepare the PR;
- Participate in Pre-Proposal Conferences;
- Evaluate proposals or chair evaluation committee;
- Participate in negotiations;
- Participate in Pre-Award Conference;
- Participate in debriefing unsuccessful offerors/quoters;
- Monitor contractor's technical performance;
- Monitor contractor's cost performance in relation to the technical effort;
- Determine acceptability of completed effort; and
- Participate in contract close-out.

The COR is <u>not</u> the KO. This means that the COR <u>has no legal authority to:</u>

- Authorize changes in a contract's scope, level of effort, period of performance, or modify any existing terms and conditions of the contract;

- Grant any extensions of time or approve any deviations from the Statement of Work (SOW) as approved by the KO;

- Suggest, state, or promise that changes, extensions, expansions, or revisions to the agreed-upon SOW will be forthcoming; or

- Authorize the contractor to undertake work beyond the monetary limits of the contract; nor advise the contractor to halt work which may result in excess costs to the government.

All changes in the terms of a contract can legally be made, and are to be made, only by the KO through properly executed modifications to the contract.

Individuals qualified to serve as CORs will be trained in accordance with the requirements of Army Federal Acquisition Regulation Supplement (AFARS) 42.90. The point is made throughout this chapter that the COR has a limited and prescribed set of duties and responsibilities. The legal restrictions on the COR are emphasized for two reasons:

- CORs often have day-to-day contact with a contractor facing difficulties meeting the requirements of the SOW and genuinely wish to help; but
- Exceeding the legal restrictions may put the COR personally at risk for cost overruns and loss (e.g., the contractor might sue for recovery of costs subsequently disallowed by the KO).

5.1.2 COR Tasks

The COR has a set of legally-defined task responsibilities. Key to executing these responsibilities is establishing, at the very outset, a system for filing in a readily retrievable manner all the records and information the COR is responsible for maintaining. At a minimum, the information to be maintained includes:

- A copy of the signed and acknowledged COR appointment letter.
- A copy of the contract with all modifications.
- Memoranda of telephone conversations which relate in any way to the contract.
- A copy of the trip report (within 7 days) of every visit that has been made to meet with the contractor.
- A copy of the minutes of all meetings and conferences with the contractor to include names of persons present, dates, matters discussed, and actions taken.
- A copy of all approvals the COR has given to the contractor.
- Copies of all data, reports and other documentation furnished by the contractor, and the COR's analysis, action taken, and the date of such action.
- Records of any inspections performed under the contract including dates, manner of inspection, and results.
- Any other documentation and data necessary to provide a complete history of all action taken by the COR under or in connection with the contract.

The COR is required to provide this information when requested to the KO, Inspector General, GAO (General Accounting Office), or any other person designated by the KO as having a valid need. Meeting this requirement starts with a good information management retrieval system.

The COR's responsibilities include not only maintaining project files, but documenting work performance, guiding the execution of the work, monitoring expenditures to preclude overruns, and minimizing the need for supplemental funding. The COR best accomplishes these duties by:

- Monitoring the contractor's technical compliance with contract terms through visits to the contractor's facility, and review and acceptance of drawings, designs, samples, reports, data and other materials required by the contract.

- Furnishing to the contractor, or making the arrangements through the KO to furnish, all technical information, materials, data or equipment designated by the contract as government-furnished materials.

- Reviewing the contractor's monthly progress and cost reports, and noting variances between planned and actual expenditure levels. Analysis of these variances may result in recommendations to the KO to:

  - Change the SOW to eliminate or control the variances;

  - Increase the cost ceiling (with or without fee) for a specific task or contract period; or

  - Cancel the contract either for cause or for the convenience of the government.

- Providing an evaluation of the contractor's overall performance to ensure timely and proper close-out of the contract. All evaluations, from "Less Than Satisfactory" to "Exceptional" must be supported by project records and memoranda.

5.2 COR FUNCTIONS

Virtually all IRP site work is performed through contractors. The COR creates the SOW, coordinates all contract actions, assists in selecting the contract type and, ultimately, in guiding contractor performance. The procedures described in this section are not cited as requirements, but are presented as examples of how COR functions may be accomplished.

5.2.1 The Procurement Process

The Army IRP workload is defined by consolidating eligible requirements from MACOMs and their respective installations into the Army IRP Work Plan (see Chapter 6.1.4). Requirements are identified through Installation RCS 1383 Reports (see Chapter 6.1.2). USAEC coordinates, develops, and maintains the IRP Work Plan to assure adherence to budget and regulatory restraints during execution. USAEC provides funding for each approved project to the selected

procurement group for subsequent contract award. After award the contract is monitored for both technical and financial execution.

5.2.1.1 The Procurement Group

The RPM, in consultation with the Installation Commander, selects the appropriate procurement group. The procurement group can be one of the following entities:

- A Government Owned, Contractor Operated (GOCO) facility at the installation being investigated;
- USAEC;
- District of the USACE;
- The installation's KO; or
- Other government agencies with unique support capabilities.

The PO or RPM provides a PR to the procurement group which then drafts and negotiates the actual contract. The information typically required to be provided in a procurement request is:

- Statement of Work - The SOW describes work to be performed by the contractor during site activities. It is the most important procurement element and should be developed in collaboration with personnel identified by the RPM to perform technical review.
- Cost Estimate - The COR prepares an Independent Government Cost Estimate (IGCE) as part of the procurement process. The COR's Resource Management unit can provide background data and general assistance in preparing/reviewing the cost estimate. Information from previous projects can be utilized in cost estimating and the COR's Resource Management unit can provide contractor labor rates and direct cost estimates.
- Instructions to Offerors - The COR provides to the procurement group information that potential contractors can use to develop a proposal. This information may include:
  - Contract Data Requirements List;
  - Data Item Description requirements;
  - Copies of Army/USEPA guidance applicable to the work to be performed;
  - Pertinent information from previous studies; and
  - Maps, geological data and chemical data, if not otherwise readily available to potential contractors.

- Source Selection Plan - The COR may be asked to write a Plan which describes how technical proposals submitted by potential offerors will be evaluated. Evaluation criteria and the approximate weight of the criteria are shown on the Request for Proposals and should reflect the work to be performed. For example, in RI/FS work, award points are given for a contractor with historical experience. For RD/RA, recent experience in construction management cost savings may be heavily weighted.

At the discretion of the KO, the PR may also contain any of the following:

- SOW Synopsis
- List of Potential Bidders
- Disposition Form
- Concurrence Sheet
- Enclosures Checklist
- Procurement Request and Summary
- Advance Synopsis (Request For Proposal[RFP])
- Personal Services Factors
- Security Classification.

5.2.1.2 Types of Contracts

The KO, in consultation with the RPM, will determine the appropriate type of contract to ensure that all phases of the IRP can be accomplished in a timely and cost-effective manner. The RPM will be expected to recommend a specific type of contract appropriate to the technical support needs of an IRP site. To do so requires two types of information:

- Contract Alternatives, and
- Site Support Requirements.

There are two basic types of contracts appropriate for engineering and feasibility studies likely to be undertaken as part of site remediation work. The contract types are:

- Fixed Price and
- Cost Reimbursement.

Within each basic family, there is a set of variants such as:

- Fixed Price Level of Effort Term (LOE):

- Cost Plus Fee: This can be Cost Plus Fixed Fee (CPFF), Cost Plus Incentive Fee (CPIF) or Cost Plus Award Fee (CPAF). In each case, a fee is added to the actual cost based upon contractual agreement.

- Fixed Price Incentive (FPI): Sometimes suitable for engineering development when technical and cost elements can be reasonably defined.

- Firm Fixed Price (FFP): Suitable only for efforts which can be precisely defined step-by-step, and which are subject to minimal cost growth.

This discussion of contract vehicles is intended as an introduction only. A more detailed comparison of contract types is set forth in Appendix B.

5.2.2 Technical Oversight

With the award of a contract, the COR assumes a set of general responsibilities for guiding, directing, reviewing, and approving the contractor's work. These activities are summarized here. Specific COR functions during the site remediation process are described subsequently.

5.2.2.1 Work Assignments

The COR is responsible for development of the work assignments which define the tasks the contractor is expected to perform. Work assignments should contain the following elements:

- Site background;
- Nature and extent of problem;
- Summary of work accomplished to date;
- Purpose of the work;
- Description of the services to be performed;
- Required deliverables; and
- Reporting requirements.

The SOW should be sufficiently detailed to define what must be done under the activity, yet not so detailed as to reduce the contractor's flexibility in developing an effective work plan to respond to DoD's needs.

5.2.2.2 Work Plan Review and Approval

The COR's objective in reviewing a work plan is to assure that the contractor understands the project and can deliver timely, high-quality work at a reasonable cost. Most of the tasks in the proposed work plan can be examined from a standpoint of technical quality, budget, and schedule.

Work plans necessarily vary in terms of technical content depending on the specific work to be performed. For an RI/FS, the contractor's work plan typically should include:

- The purpose, scope, and methodology for each task;
- The proposed quantity, distribution and purpose of each groundwater, surface water, soil, air, and other sample;
- The spacing and depth of soil borings and monitoring wells and the purpose for each;
- The types and purpose of each analysis likely to be required, based upon near-term technology forecasts;
- The use of bench- and pilot-scale studies;
- The use of groundwater or other models;
- The general relationship between the pathways to receptors, the likely alternatives, and the scope of the RI/FS; and
- Procedures for the Baseline Risk Assessment.

The schedule and organization of the project should be reviewed to ensure that task durations seem reasonable, no resource conflicts exist, the sequence of tasks seems appropriate, and events are scheduled in appropriate seasons. Also, the schedule must comply with IAG milestones.

The COR should manage the work plan review process to ensure a timely response. For sites requiring a complete RI/FS or RD/RA, the COR should distribute copies of the draft work plan to technical specialists such as geohydrologists, toxicologists, chemists, and biologists and solicit their comment.

The COR is responsible for providing to the contractor written acknowledgement of receiving the work plan, and for sending copies to the assigned parties for review. Time allotted for review is to be determined by the contractor and COR. Upon approval of the work plan, the KO should provide to the contractor written authorization to proceed.

5.2.2.3 Monitoring Contractor Performance

The COR has two essential responsibilities for contractor performance. One is procedural, the other is technical. The first concerns the budgets, due dates, overall schedule, and adequacy of funds. The second concerns the technical quality of the work, the integrity of the data, the extensiveness of the analyses, and the clarity of the conclusions. Each is discussed below.

Managing Project Activities for Cost-Reimbursable Contracts - Each work plan reviewed and approved by the COR for cost-reimbursable contracts contains a schedule and a budget. Project activities should be monitored on a task-by-task basis using accomplishments and expenditure data in the contractor's monthly reports to compare actual events against the plan. If separate tasks do not distinguish among analytical costs, field work, document preparation, and project management activities, reporting by activities such as these within individual tasks may be necessary in order to enable analysis of significant differences in either budget or time estimates.

The COR also should meet routinely with the contractor's Project Manager to review:

- Progress of each task;
- Projected expenditure levels;
- Schedule status of each task;
- Budgetary status of each task; and
- Overall project schedule and budget.

The COR is expected to use this information to plan for potential modifications to the contract. If time delays are unavoidable, the COR may recommend to the KO an extension of a specific due date or of the task's period of performance. If funding levels are inadequate, the COR may recommend raising the ceiling or exercising an option early in the contract. If, however, delays and expenditure overruns are the responsibility of the contractor, the COR may recommend actions appropriate to the situation (e.g., zero award fee points).

Managing Contractor Products - The COR, more than any other IRP staff person, knows the technical problems the contractor faces, the requirements under which the work is being done, and the policies and guidelines that drive the work. It is incumbent upon the COR to be as authoritative as possible on the following topics that are key to quality site work:

- Sampling and analysis techniques of contaminated media;
- Environmental fate and transport models;
- Risk and exposure assessment methods;
- Environmental impact assessment;
- Evaluations of remedial technologies;
- Cost estimation and value engineering; and
- Remedial design and construction considerations.

In addition to these technical areas, the COR should be familiar with all pertinent environmental regulations and policies that will affect how the technical disciplines are applied to a particular site. The COR can then provide adequate quality assurance review of project activities and reports.

5.2.2.4 Contract Modification

Only the KO can modify, change, redirect or cancel an executed contract between the contractor and the government. However, it is the COR who most often determines that a modification is required to affect the technical direction, schedule or total resources needed to complete the project.

The COR uses progress reports and meetings to track the technical and financial status of the project and spot the need for contract modifications. When contract modifications become necessary, the COR should:

- Discuss potential amendments with the contractor;
- Ensure that the proposed modification is consistent with the approved SOW in the contract;
- Prepare a modification package, and forward the package to the KO for approval and execution; and
- Maintain a signed copy of modification package in the site project file.

In general, a modification request should be initiated for each modification needed. However, in the case of minor modifications, several may be combined into one request.

5.2.2.5 Review and Approval of Final Report

A final report is usually the final deliverable in a contract. It is the COR's responsibility to ensure that the report is complete and is presented in a format that facilitates DoD review. The COR must also coordinate the external review and approval of the report. To accomplish these activities, the COR should:

- Discuss with the contractor any changes that need to be made in the report format specified in the SOW, and

- Coordinate report reviews by IRP staff and other parties.

5.2.2.6 Contract Close-Out

Following completion of all work as specified in the contract and the approved work plan, the COR prepares and processes the required project close-out documentation. If the contractor is required by the contract to submit to the Government all hard copy and computer-generated information (including duplicates), either acquired or internally generated, the COR must receive such information prior to initiating close-out. Project close-out documentation includes the:

- Contract completion report, and
- Final completion voucher.

In practice, the final close-out may be delayed several months because of late receipt of outstanding invoices.

5.3 COR FUNCTIONS DURING REMOVALS

Emergency removals, i.e., removals to respond to an imminent threat where there has been no prior planning or procurement action, should be coordinated by the COR with the KO and the On-Scene Coordinator at the installation responsible for the Spill Prevention, Control and Countermeasures Plan. The OSC may have authority to contract for emergency services from local vendors. The costs of the emergency response may be reimbursed from DERA funds if the site is eligible (see Chapter 1).

To anticipate the potential for a removal during an SI or field sampling for an RI/FS, the COR could include procedures in the contract whereby, for example:

- The contractor notifies the COR of the situation;
- The COR recommends to the KO a Stop Work order to protect worker health/safety; and
- If the contract SOW allows for such removals and a removals subcontractor is on the team, a task can be initiated to effect the removal.

Otherwise, if sufficient time exists, the COR can request, through appropriate channels, an Architectural/Engineering (A/E) contract using Installation O&M funds to evaluate the problem, generate alternatives, and design the appropriate response.

5.4 COR FUNCTIONS DURING PA/SI

For those sites requiring only PA/SI services, the SOW and work plan requirements are basically minimal. A Site Screening Inspection (SSI), which is a selective process of identifying the worst sites for funding or HRS2 scoring, may be needed. For most installations, the Preliminary Assessment of the known sites has already been completed, but some incremental data may be needed to complete the HRS2. In addition, PA/SIs may be ordered for:

- Sites discovered in the future which may not be eligible for DERA funds; and
- Sites which are not candidates for remedial action or for which the "No Action" alternative needs refining.

Given that site work requires field visits and sample collection, the contract must require the contractor to prepare and submit for approval the Site Health and Safety Plan and Sampling and Analysis Plan described previously in Chapter 4. The contract also should require a final report which summarizes all field work and the final results of the SI.

5.5 COR FUNCTIONS DURING RI/FS

As cited previously, the RI/FS effort may be lengthy, complex, challenging, and costly. As a production process, it lends itself to the use of a delivery order type contract and management of specific activities on a completion basis.

As an initial task, the contract should require that the contractor provide for COR review and approval a more complete set of planning documents than required for the PA/SI.

At a minimum, the contractor should be required to develop a set of documents that include the:

- Sampling and Analysis Plan;
- Site Health and Safety Plan;
- Public Involvement and Response Plan; and
- Financial Management Plan.

During the development of an RI/FS, it is important that the COR monitor contractor performance as described previously in this chapter.

5.6 COR FUNCTIONS DURING RD/RA

In most cases, procurement of design services from A/E firms will follow the guidelines for a Brooks Bill Procurement. This is a two-stage process in which firms submit their qualifications (independent of price) to do the work. Qualifications are reviewed and a select few firms are interviewed to obtain further information. Firms may also be requested to provide a briefing to describe their approach to the work. A contractor is selected and the cost is negotiated for the work.

During this process, the COR normally will:

- Synopsize requirements for publication by the KO in the Commerce Business Daily;
- Designate A/E pre-selection and selection boards;
- Develop an A/E pre-selection list;
- Contact A/E firms to ascertain interest in the project; and
- Develop an A/E selection list.

The primary activities of the COR during remedial design is to monitor the A/E contractor to ensure the design package being developed is consistent with the Decision Document. The COR must be alert to potential or actual design changes and, if significant, notify the KO.

In addition, the RD stage is the point at which value engineering opportunities should be encouraged. The COR should review all design proposals for cost reduction opportunities such as in materials specifications, quantities, or fast-track activities. The COR should not, however,

recommend to the KO any changes in the requirements of the DD without first consulting with the cognizant regulatory agency (USEPA or State).

When the RD package is complete, the COR should review the final remedial action cost estimate against the Feasibility Study cost estimate and resolve any discrepancies with the KO to ensure adequacy of funds for construction.

Contracts for construction of remedial actions are subject to the wage requirements of the Davis-Bacon Act.

As construction of the remedial action nears completion, the COR should discuss procedures for project termination and close-out with the contractor. The COR should note any outstanding construction items and ensure that they are completed within the existing SOW.

If there is an O&M component to the RA, a new A/E contractor may be procured to evaluate and monitor the system. DERA funds will support O&M for 10 years after which the cost is borne by installation O&M funds. The O&M contract should require the A/E contractor to submit on a quarterly basis:

- A description of on-going O&M activities;
- Results of site monitoring;
- Performance deficiencies and recommendations; and
- Planned O&M activities.

CHAPTER 6
BUDGETING, FUNDING, AND PRIORITIZATION

Limited funds may be available each year to finance IRP activities at specific sites. Therefore, it is necessary to prioritize sites so that budgeted funds will be distributed to those sites that pose the greatest actual or potential threat to human health and welfare or the environment. The Installation Commander and his/her staff should have direct involvement in the budgeting, funding, and prioritization processes described in this chapter, as these processes will directly affect specific sites at the installation.

6.1. PLANNING, PROGRAMMING, BUDGETING, AND EXECUTION

6.1.1 Planning

To assist in meeting an installation's IRP requirements, an Installation Action Plan (IAP) must be prepared (Memo, 17 Mar 1993, USAEC). IAPs are the basic tool for successful management of the IRP at Army installations. Installations whose only requirements in the IRP Work Plan are underground storage tank removals having a priority code assignment of "i", or Federal Agency Hazardous Waste Compliance Docket sites with a priority code assignment of "G", need not prepare an IAP. (See Table 6-2 for a description of priority codes.)

DASA(ESOH) recommends an increased emphasis in identifying, programming, and executing response actions that could be considered remedial actions. Initial IAPs were required to be submitted to USAEC in July 1993. MACOMs are to ensure that each installation under their command submits a new or updated IAP annually in February of each year beginning in 1994. The IAPs outline the program history, current Restoration Management Information System (RMIS) site status information, contaminants of concern, response actions taken, past milestones, and realistic goals and schedules based on known and/or expected IRP projects.

IAPs will be used by USAEC and MACOMS to monitor requirements, schedules and tentative budgets. USAEC will supply guidance in preparing the IAP; however, a general guidance outline for IAP preparation is listed in Table 6-1. The Action Plan Guidance and Procedure was distributed in March 1993 and is included as Appendix D.

TABLE 6-1
INSTALLATION ACTION PLAN PREPARATION GUIDE

Purpose:

- Define IRP Requirements;
- Propose Investigation/Remedial Action Approach; and
- Identify Remedial Action possibilities early;

An IAP will provide:

- An overview of the installation;
- A short chronological history pertaining to assessments, investigations, contaminants of concern, response actions taken and realistic goals for future action;
- All RMIS sites by:
  -RMIS Number/Contaminants
  -IRP Phase, including brief description of past/current/future actions
  -RCS 1383 Number(s);
- Schedules that include chart and table format;
- Cost estimates for actions to be taken;
- A Removal/IRA/RA assessment, with emphasis on removal and interim remedial actions that can be initiated without an extensive study phase;
- A description of major changes to IAP from previous year;
- A bibliography.

IAP Submission Process:

- Installation Commander for approval and signature;
- Chief of the environmental office at MACOM for signature; and
- MACOM submits IAP to USAEC.

6.1.2 Environmental Pollution Prevention, Control and Abatement Report (RCS 1383 Report)

Environmental projects identified in the IAP are reported in the RCS 1383, which is used to request DERA-eligible funding. Executing agencies will support the installation in preparing schedules and cost estimates for use in the RCS 1383 submission. It is highly recommended that MACOMs hold line-item reviews with each installation and their executing agency to review submission of the RCS 1383 requesting DERA eligible funds.

The RCS 1383 identifies all Army Environmental Program requirements and tracks these requirements as they are identified, programmed and budgeted, as well as the actual obligations incurred during execution. The data base is a valuable management tool and should be updated continually.

The RCS 1383 also is the Army's mechanism to provide data for the OMB Circular A-106 Report submitted semi-annually to HQ, USEPA. EPA distributes pertinent portions to the appropriate EPA Regional Office where the data and individual projects are reviewed to determine their adequacy. The HQ, USEPA then submits a summary report to OMB.

6.1.3 The Military Construction, Army (MCA) Appropriation

The Military Construction, Army (or, Army MILCON) Appropriation is used for major construction projects. These projects must be approved individually by Congress and require substantial lead-time. Environmental projects identified in the RCS 1383 for MCA funding must also be entered into the 1391 database.

MACOMs will ensure that subordinate installations perform Work Classification on IRP remedial action projects in accordance with the U.S. Army Engineering and Housing Support Center Work Classification for DERP (Note Number 420-10-2, dated 2 Apr 90). The Installation Environmental Office and the Directorate of Engineering and Housing, in conjunction with the Executing Agency will ensure that proper Work Classification has taken place. If an IRP project is classified as Military Construction (MILCON), the project should be programmed and budgeted for in the normal MCA account. In those cases where the time required for normal MCA procedures will result in a substantial danger to public health and welfare or the environment, the project may be proposed for DERA funding. DoD must approve all requests for DERA MCA funding. Normally, DERA MCA will not be considered for out-year requests. A flow chart depicting the process to change DERA to MCA current year funding is at Appendix G.

6.1.4 The IRP Work Plan

The IRP Work Plan is a centralized management document developed annually by USAEC with input from installations and MACOMs. The Work Plan identifies requirements and priorities for projects and actions anticipated in the current or following fiscal year, and includes unfunded

carry-over projects from the previous year plus new or revised projects submitted by MACOMs and installations. The Work Plan contains detailed information regarding:

- project name
- funding requirements
- project phase
- executing agency
- award status
- project priority
- RCS 1383 number

Information to develop the IRP Work Plan is obtained directly from the most recent RCS 1383 submitted by installations. USAEC ensures that all input from the installation RCS 1383 requesting DERA funds is verified and accounted for in the IRP or Base Realignment and Closure (BRAC) Work Plan. RCS 1383s that require clarification are returned to the appropriate MACOM for necessary action. Responses are required to be returned to USAEC through the MACOM within two weeks of notification. The IRP Work Plan is finalized through review and approval by the DASA(ESOH) and DEP.

As a management document, the IRP Work Plan is not a resourcing document, nor does it provide approval authority for disbursement of funds. Project funding procedures are described subsequently in this chapter.

6.2 PROJECT PRIORITIZATION

IRP sites are subject to three ranking systems: USEPA's HRS2, DoD priority categories for DERP funding, and the IRP Work Plan priorities. These ranking systems are resource management tools that may determine when IRP actions are taken; they are not intended to determine how or to what degree sites are remediated. The ranking systems differ in purpose and application as discussed below.

6.2.1 Hazard Ranking System (HRS2)

HRS2 is used by USEPA to evaluate sites (USEPA also rates entire military installations) for inclusion on the NPL. The Army considers HRS2 in prioritizing sites for RI/FS. HRS2 scores are based on data collected from the PA or PA/SI and submitted by the Installation Commander to USEPA. USEPA may determine that the data are insufficient to rank sites or installations. The Army should cooperate with USEPA in developing HRS2 scores, by providing requested data. USAEC will assist the installation in preparing PA/SI documents when requested by the Installation Commander.

HRS2 generates scores based on likelihood of a release, waste characteristics, and affected targets via groundwater, surface water, air, and soil exposure pathways. A migration score of at least

28.5 on a scale of 0 - 100 is the cutoff for USEPA to propose an installation for the NPL. If an installation is proposed for the NPL, based on the HRS2 score, the HRS2 scoring package should be reviewed by the RPM. Comments should be based on the actual situation, and the threat that has been recognized by the Army. The HRS2 was revised in December, 1991. [55 FR 51532, December 14, 1991.]

6.2.2 DoD Priority Categories

Priorities for DERP funding are determined on the basis of relative risk (site priorities), and a hierarchy of site actions (action priorities) within each site priority.

Priority 1 - High Risk Sites -- Sites which pose a public health hazard resulting from either: (a) short-term exposure likely to result in acute adverse health effects, or (b) long-term exposure likely to result in chronic adverse health effects.

Priority 2 - Medium Risk Sites -- Sites where the potential for human exposure exists but is not imminent; the pathway for human exposure is not likely to be complete within the near term (2 years).

Priority 3 - Low Risk Sites -- Sites where human exposure is likely to occur only in the long term (10+ years); the site is stable; contamination is low-level or confined, or does not present a significant ecological threat.

The six action priorities listed below apply to each site priority. They are used to rank funding priorities of sites within the same site priority.

Action Priority		
	A.	High concentration source/product removal
	B.	Contain migration, especially off-post migration
	C.	Other interim remedial actions
	D.	Other remedial design/remedial actions
	E.	Studies, including RI/FS, PA/SI
	F.	Other activities at high risk sites

6.2.3 Army IRP Work Plan Priorities

Categories of project priorities established for Army implementation of DERP are presented in priority order in Table 6-2.

TABLE 6-2 - IRP WORK PLAN PRIORITIES

PRIORITY SORT DEFINITIONS	Date: 2 Jul 93
PS CODE	**PROJECT**
	IMMINENT THREAT
A	**Confirmed Off-Post Contamination/Imminent Threat to Human Health** To be determined by the IC following consultation with the MEDDAC personnel. Provides funding for those cases where off-post contamination or on-post threat to human health, i.e., water supply, is confirmed and immediate relief is needed. This category will be applied to projects that remove or reduce the threat to human health (e.g., alternate water supply, source removal, UXO clearance) and to studies of these sites.
B	**Imminent Threat to Environment** This category will only be used with approval of DASA (ESOH) in situations where critical environments are threatened by continuing releases.
	COST OF DOING BUSINESS (In general, not to exceed 15%)
C	**Management and Salaries** Includes salaries, travel, supplies, MACOM program management, TJAG support, and any other mission-funded costs.
D	**Supervision & Administration (S&A) (prior year)** Exclusively for S&A on projects funded in previous fiscal years. Current year S&A receives same priority as project. This category is not intended for "in house" support.
E	**Program Support** Includes funding for: - technical support, (e.g., total program data management, analytical procedures validation and methods development and technical information repository); - DA public affairs; - ADP equipment procurement; - mission-essential training (OSHA or other mandated training) not to exceed 0.5% of total program.

TABLE 6-2 - IRP WORK PLAN PRIORITIES (Continued)

PRIORITY SORT DEFINITIONS	Date: 2 Jul 93
PS CODE	**PROJECT**
	PROJECT COSTS
F	**Project Support** - advance funding for scope preparation for specific projects in the work plan designated as FYXX SCOPING for the current fiscal year. These projects are authorized only for immediate scope preparation and will not be submitted for procurement unless given direction to do so by the CDR USAEC. Projects that are authorized by the CDR USAEC for submittal to procurement are designated FYXX SAF. These projects will either be late 4th quarter awards or be given the designation of 'M' fore the following fiscal year, and become 1st quarter awards in that year. Scoping funds only to be used to pay USACE Districts. - USAEHA support - EOD/Tech Escort Unit Support, surety screening (prior year projects). Current year projects are listed at the project's priority level.
G	**Federal Agency Hazardous Waste Compliance Docket - PA/SI** For conducting PA/SIs at non-NPL facilities listed on the docket to obtain initial or follow-up information necessary for EPA to rank with the HRS2.
I	**Cost Growth (Prior Year)** For legitimate, i.e., no additions in scope, cost growth from a previous year that may be funded with current year money. Requests must be made for use of existing prior year funds. This category will not be used for follow-on work in either options contracts or indefinite delivery order contracts.
K	**IRA/Removals** Provides for expedited IRA/removals identified in the most recent Installation Action Plan (IAP). No investigations are allowed under this priority. The total of all projects in this category will not normally exceed 5% of the funded Army DERA.
M	**SAF (prior year)** Includes those projects, depending on DERA appropriation and scope prep projects, from the previous fiscal year which were designated SAF and remained unfunded. These projects must be awarded in the 1st quarter, otherwise they revert to priority based on their merit.

TABLE 6-2 - IRP WORK PLAN PRIORITIES (Continued)

PRIORITY SORT DEFINITIONS	Date: 2 Jul 93
PS CODE	**PROJECT**
N	**Remedial Action Operations (RAOPs)** Funding for long-term RAOPs. Use of this category is not to exceed 10 years per each remedial action, after which RAOPs are to be installation-funded. This category includes monitoring in support of a DA-approved ROD or other decision document. This also includes 5-year relooks.
O	**Litigation Driven Programs** Programs resulting from judicial orders. Requires DAJA-EL concurrence.
Q	**PRP Settlements** Payments by the Army on third party sites due to legal actions.
S	**MOUs, MOAs, FFAs and IAGs** For agreements made at the DA level between the Army and any outside organization. ATSDR funding must be authorized and funding provided by DoD. This does not include DSMOAs. This category also includes the payment of oversight costs where an IAG has been signed at the DA level and no DSMOA is in effect. This category is not to be used for CERCLA/SARA 120 agreements.
U	**NPL Sites with Approved ROD** NPL sites with regulator-approved schedules for IAGs signed at the DA level. These projects must be necessary to satisfy IAG requirements. This should not be used for discretionary projects within the IAG framework.
X	**High Potential for Off-Post Contamination** This category should be used when contamination has been confirmed at or in close proximity to the installation boundary, and has a high potential to migrate off post. This is for investigation/cleanup of the off-post contamination and for the site or sites suspected of causing the contamination.

TABLE 6-2 - IRP WORK PLAN PRIORITIES (Continued)

PRIORITY SORT DEFINITIONS	Date: 2 Jul 93
PS CODE	**PROJECT**
Z	**Notice of Violation (NOV), Consent Orders/Agreements** This category is to be used for efforts under Consent Orders/Consent Agreements to resolve NOVs or other enforcement actions for failure to perform a DERA-eligible restoration activity, i.e., RCRA corrective action, UST removal, or state laws. All NOVs must be properly reported to ENAUSAEC-EC in order to obtain this priority.
a	**RDTE/HAZMIN** Provides for the minimum essential level of funding as authorized by DoD for RDTE and HAZMIN.
c	**Non-NPL Remedial Actions** For remedial actions at non-NPL sites with approved decision documents.
e	**Elements Not Covered Above** - NPL Sites with no IAG - NPL Sites with IAG but no Regulator-Approved Schedule - Non-NPL Sites on NPL Installations with IAGs - Signed restoration agreement w/state, two-party **RCRA PERMIT CORRECTIVE ACTIONS**
g	**Installations where chemical demilitarization is part of the designated mission.**
h	**Other Installations**

TABLE 6-2 - IRP WORK PLAN PRIORITIES (Continued)

PRIORITY SORT DEFINITIONS	Date: 2 Jul 93
PS CODE	**PROJECT**
i	**UST Removals** For UST and surrounding soil removal only. Plume definition and site investigation will be prioritized independently and placed in the workplan based on their merit. Cannot be used if removal is incidental to replacement.
k	**Special Considerations** - Non-NPL Sites on NPL Installations without IAG - Proposed NPL installations without IAG - Compliance with State restoration laws, or permits or licenses with restoration requirements
m	**Continuity Projects - Normal Progression** This category refers to installations or sites where previous work has been done and information is available which justifies further progression. The normal IRP progression of PA/SI, RI/FS, RD/RA, and monitoring is followed.
n	**Excessing Action** This category is for excessing or base closure projects requesting DERA funding and for projects that do not meet requirements for a higher priority.
o	**Remainder of RDTE, beyond minimal essential defined in PS code "a"**
p	**HAZMIN (lower priority) Priority 2 - 2-year return on investment**
q	**HAZMIN (lower priority) Priority 3 - 3-year return on investment**
r	**Building Demolition/Debris Removal.**
s	**Remainder of Funding - THIS CATEGORY FOR USAEC USE ONLY** This category will account for any differences between actual funding and the RCS-1383 requirements level.
t	**No Current Funding Required**

6.3 FUNDING

USAEC has been designated as the Army's program manager for the IRP. Funding for DERA Active sites is provided by the Assistant Secretary of the Army, Financial Management (ASAFM) to USAEC. USAEC distributes funds to an installation or executing agency in coordination with and at the direction of the MACOM. The Military Interdepartmental Purchase Request (DD Form 448) is used as the vehicle to provide funding to executors.

6.3.1 Cash Allocation Requirements/Obligation Plans

Immediately following approval of the IRP Work Plan, the executing agency will submit an Obligation Plan. Obligations will be input by month and based on recommended funding from the HQDA project list as provided in the IRP Work Plan. The Obligation Plan must anticipate meeting DoD obligation targets. The Cash Allocation Requirements should represent funding allocations for in-house effort and contractual efforts anticipated to be awarded during the fiscal year. All project requirements should be executable, realistic and achievable.

6.3.2 Continuing Resolution Authority

Plans must be developed to initiate execution of the IRP under Continuing Resolution Authority (CRA). Generally, neither the length of operations under the CRA nor specific CRA language can be anticipated. MACOMs will submit, in September, requirements for operations in 30-day increments up to 90 days.

6.3.3 Monthly Financial Status Report

The executing agency will provide to USAEC a Monthly Financial Status Report which is used to respond to HQDA, DoD, and Congressional inquiries. These reports will be submitted by the 8th workday of each month for the prior month. Information will include:

- Approved Annual Funding Program (AFP);
- Requested revised AFP;
- Funds received;
- Funds required for next quarter (only if different from Cash Allocation Requirements previously submitted);
- Funding status remarks (including information regarding whether the AFP is adequate or inadequate);
- Planned obligations (only if different from Obligation Plan previously submitted);
- Actual obligations;
- Dollar variance;
- Percent variance; and
- Explanation of variances in excess of 15% or $200,000 per site.

6.3.4 Funding Level

The RCS 1383 provides information for the Budget reflecting Current Year/Budget Year/Years plus 5 Work Plan Forecasts (BY+5) used to develop the annual IRP Work Plan. USAEC utilizes the BY+5 for budget preparation for HQDA/DoD outyear programming. Most IRP requirements cannot be accurately predicted more than two to three years in advance; therefore, MACOMs must use their best judgement and technical information available in determining outyear requirements. The total MACOM requirements should reflect long-range forecasts for all phases of the IRP.

Once a prioritized list of projects has been developed, the current FY budget guidance for DERA is imposed on the list to establish the "cutline." Projects directly above the cutline are identified as SAF that allows a buffer for cost-growth of higher priority projects above the zone. It also allows for funding of emergency requirements. If the SAF projects are still above the cutline at the end of the 3rd quarter (3Q) of the current FY, the funding will be released for execution of the projects. If these projects have not been funded by the end of the current FY, they will rank high in priority and be eligible for funding in the 1Q or revert to priority based on their merit.

Projects directly below the cutline will be identified as scoping projects and require that a SOW be prepared to initiate procurement should funding become available during the current FY. If these projects remain unfunded at the end of the FY and are executable, they may receive a higher priority in the next FY. Table 6-3 provides the life cycle of the FY/FY +1 Work Plan.

6.3.5 Execution

The Installation Commander is ultimately accountable for his/her individual IRP; therefore, installations will assume responsibility for execution of their restoration program. This policy provides the installation the option of determining the performer(s) for executing the IRP. The executor for each project listed in the current FY and FY+1 work plans must be identified in the narrative of the RCS 1383 submission and reflected on the IRP Work Plan. Prior to the Fall submission of RCS 1383s, installations must notify the preferred executor in writing and receive written confirmation from the executor for FY+1 projects. A low priority code will be given to those projects that do not identify a performer.

TABLE 6-3
WORK PLAN LIFE CYCLE

Time Period	Activity
December 7	Fall RCS 1383 Submission
January	Revised CY/BY to field for review
February	Work Plan review meeting; IAP revisions due to USAEC
March	Revisions made per comments from Work Plan review meeting; Approved CY/approved Draft (planning only) to field
May 15	Spring RCS 1383 submission
June	Revised CY/revised BY to field for review; Work Plan review meeting
July	Revision, final approved CY/initial approved BY to field
August 15	Obligation plans for BY due to USAEC (SFIM-USAEC-RMB)
September	Work Plan provides input for the President's budget
October	Year-end closeout
November	Work Plan review meeting (discuss End-of-Year obligations, 1Q execution, actual program allocation
December	CY Work Plan revised, approved, distributed

CY = the current FY
BY = FY + 1

CHAPTER 7
DOCUMENTATION, REPORTS, AND COMMUNICATION

The IRP process should not be considered completed for a site until all the appropriate documentation of response action decisions and reports are submitted. Congressional and regulatory agency requirements necessitate the collection and reporting of considerable amounts of information to ensure compliance with various legislative acts. Army Inspector General audits are required to ensure that DERA is being properly administered. It is essential that installations and MACOMs maintain detailed records to facilitate financial and technical/environmental reporting requirements. This chapter describes site documentation and information requirements.

7.1 ADMINISTRATIVE RECORD

An Administrative Record is a compilation of documents that records the Army's decision-making process regarding the selection of a response action to be taken at a site. An Administrative Record must be established and maintained for each NPL or non-NPL site where a response action may be implemented under the authority of CERCLA. Installation Commanders may assign responsibility for the Administrative Record as he/she deems appropriate.

The purposes of an Administrative Record are to:

- Serve as the basis for judicial review - CERCLA Section 113(j)(1) provides that judicial review of any issues concerning the adequacy of any response action shall be limited to the Administrative Record;

- Document the Army's consideration of all significant public comments concerning the response action; and

- Adequately represent the views of all parties involved.

Public participation procedures -- outlined in the NCP, CERCLA Sections 133(k)(2)(a-b) and 117, and Chapter 4 of this Guidance, specifically with regard to notice of availability, solicitation of public comment for at least 30 days, and responses to comments -- will apply to the Administrative Record. The record must be available for public review and comment by the end of the RI/FS scoping step when the final RI/FS Work Plan is available. The notice of availability of the record for public inspection must be published to explain the purpose of the record, where the record is available, and how the public may participate in the development of the record. Section 113(k)(1) of CERCLA requires that an Administrative Record be established and made available for public inspection and copying at or near the installation. It is preferable that the record be located at an information repository on-site. However, if security requirements do not allow for ready public entry to an installation, then the record should be located at an information repository off-site, such as a local library.

An Administrative Record shall include all information considered or relied on when selecting the response action. In general, this information includes:

- Final IRP reports;
- Correspondence with USEPA and State regulatory agencies; and
- Public participation notices, transcripts, comments, and plans.

Table 7-1 lists specific information and documents, if generated for a site and considered or relied on when selecting the response action, that must be contained in an Administrative Record.

In order to provide a degree of control over documents included in the record, each Administrative Record must be indexed. The index can prevent the record from being altered simply by physically adding or removing documents. The index should include the following information for each document:

- Title;
- Author;
- Recipient;
- Date; and
- Location.

Periodic updates of the index must be made, either when a new document is added to the record or at consistent and reasonable intervals (e.g., monthly or bimonthly).

TABLE 7-1 CONTENTS OF AN ADMINISTRATIVE RECORD

	Remedial Action	Removal Action
Factual Information		
Notification of Release	*	*
Preliminary Assessment Reports	*	*
Site Inspection Reports	*	*
Work Plans and Amendments	*	*
Health and Safety Plans	*	*
Sampling and Analysis Plans	*	*
Verified Sampling Data	*	*
Chain of Custody Forms	*	*
Public Health Evaluations	*	*
Factual Information Submitted by Public	*	*
Remedial Investigation Reports	*	NA
Draft Feasibility Studies	*	NA
Data Summary Sheets of Technical Models Used	*	*
Bench - or Pilot-Scale Treatability Studies	X	X
Policy and Guidance		
Memoranda on Site-Specific Policy and Legal Decisions	*	*
Guidance Documents	*	*
Technical Literature	*	*
Public Participation		
Community Relations Plan	*	**
Submissions Containing Information Considered or Relied on in Selecting Response Action	*	*
Documentation of Meetings	X	X
Public Notices	*	*
Public Comments	*	*
Responses to Significant Comments	*	*
Transcripts of Public Meetings	*	*
Responses to State Comments	*	*
Fact Sheets Summarizing Cleanup Program	X	X
Other Party Information		
ATSDR Health Assessment (NPL Sites)	*	*
Natural Resources Trustees Findings of Fact	X	X
Documentation of State Involvement	*	*
Interagency Agreements (NPL sites)	*	*

TABLE 7-1 CONTENTS OF AN ADMINISTRATIVE RECORD (Continued)

	Remedial Action	Removal Action
Decision Documents		
Proposed Plan	*	*
Record of Decision	*	*
Decision Document	*	*
Record of Decision Amendments	*	*
Enforcement Documents		
Administrative Orders	*	*
Consent Decree	*	*
Affidavits	X	X
Notice Letters to PRPs	X	X
Responses to Notice Letters Containing Factual Information	X	X
Index	*	*
Other Information		
NPL Rulemaking Information (only if relevant to the selection of a response action)	X	X
RCRA Information (only if relevant to the selection of a response action)	X	X
New Technical Information Presented by PRPs During Negotiations (only if relevant)	X	X
Information from Telephone Logs (only if relied on in selecting response action)	X	X

*	Document (if generated for a site) typically included in Administrative Record.
**	Document typically included in Administrative Record if removal action takes more than 120 days to complete.
X	Document (if generated for a site) not typically included in Administrative Record, unless relied on when selecting response action.
NA	Document not applicable to type of response action indicated.

An Administrative Record should not include:

- Draft contractor reports;
- Draft documents not otherwise provided to the public, unless relied on when selecting a response action;
- Informal notes or comments;
- Irrelevant information related to other issues, such as liability of PRPs, or documentation of the cost of implementing the selected response, HRS2 scoring package or contractor work assignments;
- Documents received after closing the record; or
- Deliberative documents expressing opinions and recommendations generated before a decision is made, unless relied on when making a response action decision.

In addition, the following privileges and exemptions must be considered before documents are included in the public portions of the record:

- Matters of national defense or foreign policy;
- Internal agency rules;
- Information exempted by other statutes;
- Trade secrets, commercial, or financial information;
- Privileged inter-agency or intra-agency memoranda;
- Personal privacy;
- Investigatory records compiled for law enforcement purposes; and
- Records of financial institutions.

If a document is excluded from the public portion of the record because of a privilege or exemption, but contains factual information considered or relied on to make a decision, that factual information must, if feasible, be extracted and included in the public portion of the record. Any information considered or relied on which is withheld from the public portion of the record must be placed in a confidential portion of the Administrative Record. In no case can the record omit significant data considered or relied upon to justify the selection of a response action. Legal staff should be involved in the development and compilation of the record in order to ensure its adequacy and completeness for judicial review purposes.

An Administrative Record may only physically include the index and any documents unique to the site. To avoid unnecessary duplication, documents that pertain to multiple sites need not be included in each record, but one copy of each of these documents must be made available at the same location as the index.

Since each Administrative Record must be present and in legible condition for judicial review purposes, the security and integrity of each record must be maintained at all times. A copy of each record and one complete set of multiple site documents not physically included in each record should be kept in a secure location, such as a locked room or file cabinet that is not accessible to the public. A separate copy of each record and a set of multiple site documents should be retained at the information repository for public inspection. In addition, controlled access to the publicly accessible record can be accomplished by using a sign-in book as a visitors record.

For NPL sites, the Army must submit a copy of each document in the record to the appropriate USEPA regional office. These records will be maintained by USEPA in a document room and made available for public inspection and copying.

Additional guidance regarding specific requirements for an Administrative Record and State involvement in compilation of the record can be found in Subpart I, Sections 300.800 through .825 of the NCP. Refer also to DoD guidance in Administrative Records for Decisions on Selection of CERCLA Response Actions (DASD(E), August 3, 1987), Final Guidance on Administrative Records for Selecting CERCLA Response Action, OSWER Directive 9833. 3a-1, 3 Dec 1990.

7.2 INFORMATION REPOSITORY

The NCP requires that at least one local information repository be established at or near the installation for all remedial action sites (Section 300.430(c)(2)(iii)), and for all sites where removals last longer than 120 days (Section 300.415(c)(2)(iii)). It is preferable that two information repositories be established by the time the CRP is prepared: one on-post and one off-post. The on-post repository should be located at the Post library, Public Affairs Office, or other publicly accessible place. Because the public very often feels uncomfortable visiting an on-post information repository location, and because security requirements sometimes do not allow for ready public entry to an installation, an off-post repository should be located at an easily accessible community location (local library). This location may be determined during the community interview process of the CRP. The Installation Public Affairs Staff is responsible for establishing the repository. In addition, the Public Affairs staff shall notify interested parties of the establishment of the repository, and any additions or deletions to it, as required by the NCP.

The purpose of the information repository is to facilitate public participation in the response action decision process by providing a place where items pertaining to a response action site will be stored and made available for public inspection and copying during reasonable times, such as 9 a.m. to 4 p.m., Monday through Friday.

The contents of the repository may include, but is not limited to, copies of the following items:

- CRP;
- PA/SI;
- RI/FS Work Plan;
- Final FS
- Installation Assessment/Installation Assessment Update
- Proposed Plan
- Master Environmental Plan
- Public meeting minutes/transcripts; agendas; view graphs; handouts
- Decision Memorandums
- News clips or press releases related to the IRP
- Sampling data
- Final RI Report;
- Draft FS;
- Record of Decision;
- Remedial Design;
- Fact Sheets;
- Guidance Documents;
- CERCLA;
- NCP;
- NPL, if applicable; and
- Administrative Record (which will contain the items listed above).

If there is more than one information repository for a site, only one must contain the Administrative Record; the others must clearly note the location of the Administrative Record.

7.3 DECISION DOCUMENTS

The purposes of Decision Documents (DDs) are to:

- Demonstrate that the response action chosen is consistent with, and meets the requirements of, CERCLA and the NCP;

- Demonstrate that the evaluations and documentation supporting the response action satisfy the intent of the National Environmental Policy Act of 1969; and

- Document Army decisions regarding response action selection.

DDs will be used throughout this section as a generic term that applies to both NPL and non-NPL sites. The official term applied by CERCLA and the NCP for the documentation of a final remedial response action decision at an NPL site is a Record of Decision (ROD). There is no official term for the documentation of decisions at non-NPL sites and/or sites at which interim response action decisions have been made. The Army has adopted the term DD.

There are four types of response actions that require DDs:

- Removals;
- Remedial action;
- Operable unit; and
- No action.

Removals are preceded by a DD where practicable, i.e., when time permits. Otherwise, a DD may be prepared concurrently with or after completion of a removal.

A DD consists of three parts: a declaration; a summary of the response selection; and a community relations responsiveness summary. [There may be instances where contamination is left in place. In such instances, a Health Risk Assessment may be required and made part of the DD to substantiate the decision.]

The declaration includes the site name and location, a list of documents reviewed, a description of the selected alternative, declarations of consistency with CERCLA and the NCP including statutory findings and preferences, and a declaration that the evaluations and documentation supporting the response action satisfy the intent of the National Environmental Policy Act of 1969. Table 7-2 lists the statutory findings, required by CERCLA Sections 121(b)(1) and 121(d)(1 and 2a) that must be made for different types of Decision Documents. In addition, the declaration should explain whether or not the selected alternative satisfies the statutory preference for alternatives which employ treatment that permanently and significantly reduces the toxicity, mobility, or volume of hazardous substances as their principal element.

The summary of the response selection includes the following:

- Site name, location, and description;
- Site history;
- Current site status;
- Alternatives evaluation that includes a review of all alternatives (including the no action alternative) developed, screened, and evaluated; a brief summary of the process; explanation of elimination of alternatives; cost estimates for all final alternatives; a cost effectiveness evaluation that describes what factors were used to screen and evaluate alternatives; a summary of the advantages and disadvantages of all alternatives considered in the FS and the selected alternative;
- Community relations history;
- Method of compliance with NEPA, that is, exemption per AR 200-2, environmental assessment, or environmental impact statement;

- Consistency with other environmental laws;
- Selected alternative including description and rationale for selection; and
- Operation and maintenance including a description of projected activities.

The community relations responsiveness summary is included as part of the final DD package and consists of a summary of public comments and Army responses, an explanation of differences between the publicly preferred alternative and the selected alternative (if appropriate), and a list of community relations activities conducted by the Army to encourage citizen input.

The following points outline the principal steps in the review and approval of Decision Documents.

- The RPM prepares the DD and coordinates its review and approval.
- At a minimum, the RPM's draft DD will be reviewed by the Installation Commander, the MACOM and, except for No Action DDs, the action's implementing USACE Division/District.
- In addition, for NPL installations, the DD must also be reviewed by HQDA.
- The RPM then amends the DD as indicated, and transmits it to State and USEPA Regional offices for comment.
- After any concerns are addressed, the DD is submitted to the Installation Commander for signature, then transmitted to the MACOM for concurrence, and further transmitted for signature by DASA(ESOH).
- The approved DD is transmitted to USEPA for concurrence. In the event that USEPA does not concur, differences should be resolved as required by the Interagency Agreement previously negotiated.
- Approved DDs are entered into the information repository and the Administrative Record, and distributed to members of the Technical Review Committee.
- The public is notified of the availability of the DD as discussed in Chapter 4.

Any modifications to a selected response action that differ in any significant respects from the approved DD must be documented and made available for public review and comment in accordance with the CRP.

Guidance regarding DDs can be found in Superfund Decision Documents (USEPA, July 1989).

TABLE 7-2
STATUTORY FINDINGS REQUIRED BY CERCLA
SECTION 121(B)(1) AND 121(D)(1 AND 2A)
FOR DECISION DOCUMENTS

Statutory Findings

Type of Decision Document	Protective	Attain ARARs	Cost-Effective	Utilizes Permanent Solutions, Alternative Treatment, or Resource Recovery Technologies to Maximum Extent Practicable
Removal	X	X (when practicable)		
Remedial Action	X	X	X	X
Operable Unit	X		X	
No Action	X			

7.4 DISTRIBUTION AND REVIEW OF DOCUMENTS AND REPORTS

Remedial action and removal processes involve numerous documents and reports. Responsibility for submission, review, and/or distribution varies according to the type of document or report, and may vary by project. The Installation Commander and his/her staff should be well informed of those documents and reports for which the installation is responsible for submitting, reviewing, and distributing. (See Table 7-3 for typical responsibilities.) Installation Commanders may modify submission, review, and distribution responsibilities in coordination with regulatory agencies. In particular, Interagency Agreements for NPL installations involving the Army, USEPA, and state agencies may well stipulate report distribution and review procedures that vary from Table 7-3. (See also the model agreement in Appendix A.)

Preliminary drafts of contractor reports are reviewed by the COR, the Installation Commander, Installation Environmental Coordinator, Executing Agency, MACOM, and USAEC or others as appropriate. The COR should consolidate the comments and provide instructions to the contractor to prepare a second draft. The second draft is reviewed by the following:

- COR;
- Installation Commander;
- Installation Environmental Coordinator;
- Executing Agency;
- Regional USEPA Office;
- USAEC;
- USAEHA (Risk Assessment);
- State Public Health Department and/or State Environmental Protection Agency; and
- Any other members of the Technical Review Committee/Restoration Advisory Board, if active.

Comments on the second draft are returned to the COR. The COR may require the contractor to address all or part of these comments in the final report.

The final report is distributed in accordance with the IRP distribution list presented in Table 7-4. The distribution list is available from, and periodically updated by, the Chief of the Installation Restoration Division, USAEC.

TABLE 7-3: Submissions, Review and Distribution of IR Documents and Reports

DOCUMENT	Reference	HQDA	MACOM	USACE*	KO	RPM	IC	IPAO	EPA	State	Public **	Contractor	DTIC	DLSIE	ATSDR	Congress
SITE STUDIES AND PLANS																
Notification of Release	3.4.1	C	C	C		S	C		C	C						
Preliminary Assessment Report	3.4.2		C	R	C	R	R	C	C	C		S	C	C		
EPA Preliminary Assessment Form	3.4.2		C	C		S	R		C	C						
Site Inspection Work Plan	3.4.3		C	C	R	R	R		C	C		S				
Site Inspection Sampling and Analysis Plan	3.4.3		C	C	C	R	R		C	C		S				
Site Inspection Worker Health and Safety Plan	3.4.3		C	C	C	R	R		C	C		S				
Site Inspection Report	3.4.3		C	C	C	R	R	C	C	C		S	C	C		
HRS Scoring Package	3.4.3		C	C		R	R		R	C		S				
NPL Listing Proposal	3.4.3	R	R	R		R	R	R	S	R	C					
Public Involvement and Response Plan	3.5.1			C	C	R	R	S			C		C	C		
Notice of Record and Repository	3.5.1		C			C	R	S	C	C	C					
RI/FS Work Plan	3.5.1		C	C	R	R	R		C	C		S				
RI Sampling and Analysis Plan	3.5.1		C	C	C	R	R		C	C		S				
RI Worker Health and Safety Plan	3.5.1		C	C	C	R	R		C	C		S				
RI Report	3.5.5		C	R	C	R	R	C	C	C		S	C	C		
Health Assessment (primarily for NPL sites)	3.5.2	C	C	R*		C	C		C(b)	C(b)	C(b)				S	
Draft Feasibility Study	3.5.6	R(n)	C	R	C	R	R	C	C	C	C	S	C	C		
Notice of Draft FS	3.5.6		C	C	C	C	R	S	C	C	C					
Proposed Plan	3.5.7		C	C		R	R	S	C	C	C					
Transcript of Public Hearing	3.5.7			C		C	R	S	C	C	C					
Response to Comments	3.5.7		C	C		S	R	R	C	C	C					
Decision Document	3.5.7	R	C	R	C	R	R	C				S				
Notice of Decision Document	3.5.7		C			C	R	S	C	C	C					
Interagency Agreement (for NPL sites only)	3.5.7	R	R	R	C	R	S		S	C	C					
Remedial Design/Remedial Action Work Plan	3.6.1		C	R	C	R	R		C	C		S				
Bid Documents	3.6.1			R	R	S	R		C	C						
RA Worker Health and Safety Plan	3.6.2		C	R	C	R	R					S				
RA Sampling and Analysis Plan	3.6.2		C	R	C	R	R		C	C		S				
Contractor Documentation of Work & Equipment Installed	3.6.2		C	C	R	R	C					S				
Site Worker and Visitor Logs	3.6.2				R	C					S					
As-Built Drawings	3.6.2		C	C		R	C					S				
Operations & Maintenance Manual for Electro-Mechanical Equipment	3.6.3		C	C		R	R					S				
Post-Project Monitoring Report	3.6.3		C	C		R	R		C	C		S				
Post-Project Compliance Review Reports	3.6.3		C	C		R	R		C	C		S				
CONTRACT DOCUMENTS ****																
Procurement Report	5.2.1			R	R	S	R									
Request for Proposal	5.2.1				S	C	C					C				
Technical Proposal	5.2.1				C	R						S				
Cost Proposal	5.2.1				R							S				
Value Engineering Change Proposal	5.2.1			R	R	R	C					S				
Change Orders/Modifications	5.2.1			R	S	R	R					C				
PERFORMANCE/FINANCIAL REPORTS																
RCS 1383	7.6	R	R	R	R	R	S									
Cash Allocation Requirements/Obligation Plans	6.2		S	R	R	R										
MACOM Monthly Financial Status Report	6.2		S	R	R	R										
Contractor Monthly Financial Performance Report	5.2.2				R	R										
Annual Reports	7.10	R	C													C

CODES: S = Submits; R = Reviews; C = Receives Copy Only;a = Coordinated through AEHA; b = Receives Copies through IC; n = for NPL sites only
IPAO = Installation Public Affairs Office; DTIC = Defense Technical Information Center
DLSIE = Defense Logistics Studies Information Exchange

NOTES

* Indicates distribution through USACE for program oversight only.
If USACE provides Remedial Project Manager (RPM), distribution to USACEIs as shown for RPM.

** RPM may be provided by Installation, Corps of Engineers Division/Districts or USAEC.

*** Indicates documents specifically intended for public distribution. All site reports and plans will be made available to the public in an information repository. (See Section 7.2)

**** Contract documents shall pertain to all PA, SI, RI, FS, RD, RA and post-project activities performed by contractor.

TABLE 7-4 IRP DISTRIBUTION LIST

Recipient	Number of Copies
Defense Technical Information Center Cameron Station Alexandria, VA 22314	2
Defense Logistics Studies Information Exchange U.S. Army Logistics Management Center Fort Lee, VA 23801	2
Commander U.S. Army Environmental Center ATTN: SFIM-USAEC-RM-TIC Aberdeen Proving Ground, MD 21010-5401	7
Installation	15
MACOM	2
HQ USACE ATTN: CEMP-RI 20 Massachusetts Avenue, N.W. Washington, D.C. 20314-1000	4
TOTAL	32

7.5 FEDERAL AGENCY HAZARDOUS WASTE COMPLIANCE DOCKET

The Federal Agency Hazardous Waste Compliance Docket is a list of Federal properties where hazardous waste releases have occurred or where hazardous waste operations require notification of regulatory agencies or permits. The purposes of the docket are: (1) to identify the universe of Federal facilities that must be evaluated to determine if they pose risk to public health or the environment; (2) to compile and maintain the information submitted to USEPA on these facilities under the provisions listed in section 120(c) of CERCLA; and (3) to provide a mechanism to make this information available to the public.

If not already on the Docket, Federal properties will be added when they:

- Apply to USEPA or authorized states for a permit to operate a treatment, storage, or disposal facility for hazardous wastes in compliance with Section 3005 of RCRA;

- Notify USEPA or an authorized State of the generation, transportation, treatment, storage, or disposal of RCRA hazardous wastes or the production, burning, distribution, or marketing of fuels made from RCRA hazardous wastes or used oil in compliance with Section 3010 of RCRA;

- Identify to USEPA or an authorized State any other past or present Federal property at which RCRA hazardous wastes have been stored, treated, or disposed in compliance with Section 3016 of RCRA; or

- Notify the National Response Center of a release of a reportable quantity of a hazardous substance in accordance with Section 103(a) of CERCLA.

Every six months, USEPA will publish in the Federal Register a list of Federal properties which have been included on the Docket during the preceding six month period. These properties must complete a Preliminary Assessment and, if warranted, a Site Inspection within 18 months of publication of the Docket notice.

It is the Installation Commander's responsibility to provide the PA or updates, as required, in order that USEPA can score the installation for possible inclusion on the NPL. The installation may choose to prepare the documentation in-house or contract through USAEC or a USACE District.

7.6 RCS 1383, THE A-106 REPORT

Like all Federal agency projects required to be in compliance with Federal, State, and local environmental laws, Army IRP projects must be identified in the Environmental Pollution Prevention, Control and Abatement Report (the RCS 1383 Report described previously in Chapter 6). This report is also called the A-106 Report. It is submitted through USEPA to the Office

of Management and Budget for review of Federal agency budget requests. Identification of environmental projects and other environmental requirements in the A-106 Report are required by OMB Circular A-106, "Reporting Requirements in Connection with the Prevention, Control, and Abatement of Environmental Pollution at Existing Federal Facilities." The requirement is implemented in DoD by DoD Directive 5100.50, "Protection and Enhancement of Environmental Quality," and in the Army by Army Regulation 200-1, "Environmental Protection and Enhancement."

Army installations provide updated and new information on environmental projects using the automated system known as DB1383, which generates the Reports Control Symbol (RCS) 1383 Report. Submission of projects in the RCS 1383 Report is a prerequisite for DERA funding of Army IRP projects. This information is also essential to development of the IRP Work Plan. For more detailed guidance on how to input IRP projects, please contact USAEC.

7.7 DEFENSE ENVIRONMENTAL NETWORK AND INFORMATION EXCHANGE (DENIX) [Formerly the Army Defense Environmental Electronic Bulletin Board System (ADEEBBS)]

As part of the Department of Defense effort to consolidate environmental information management throughout DoD, a DoD-wide electronic information exchange has been created to facilitate and support communications and environmental awareness throughout DoD. This new system, the DENIX, incorporates the data, information, and requirements of the DoD components and contains all the information that was previously available in the DoD, Army, Navy, and Air Force bulletin boards. The DENIX, whose structure is based largely on the Army's Defense Environmental Electronic Bulletin Board System (ADEEBBS), became available to DoD environmental personnel in August 1993. The DENIX consists of an integrated set of menus comprising a collection of application programs, databases, bulletin board forums, and UNIX utilities to complement other existing environmental consultation and assistance services available to DoD personnel.

In 1991, the ADEEBBS was initiated by the USAEC and developed by the U.S. Army Construction Engineering Research Laboratory (USACERL). The ADEEBBS functional requirements assessment was guided by the Installation Restoration and Environmental Compliance Divisions of the USAEC, in conjunction with HQ Army Materiel Command (AMC) and the National Guard Bureau (NGB). Technical support and technical requirements for the ADEEBBS were guided by the Resource Management Division of the USAEC. These same relationships will apply to the Army's portion of the DENIX.

The goal of the Army, and now DoD, is to provide the user with the capability to transfer files to/from the host computer and the user's personal computer, search and retrieve information from large databases, exchange ideas and information in a bulletin board fashion, browse environmental information from various sources, and communicate by electronic mail. Additionally, the DENIX can be used as a vehicle for electronic reporting. As a reporting mechanism, the DENIX facilitates the environmental reporting process by providing a file transfer

mechanism for forwarding required reports (e.g., 1383 Report, 1485 Report) through the chain of command. Installation users can forward their reports to their MACOM or major subordinate command. MACOMs can then forward their aggregated reports to USAEC. On-line program management tools, such as the Army IRP Work Plan, can also be accessed through DENIX.

The DENIX provides access to a wide variety of information which can be downloaded to personal computers. DENIX includes:

- The DERP, the Environmental Compliance Assessment Program (ECAP), the Restoration Management Information System (RMIS), DSMOA, and FUDs
- Current environmental news and environmental, legislative and regulatory alerts
- Lists of training seminars and courses, environmental awards, and environmental job openings
- Cultural and natural resources data and complete texts of technical papers
- On-line electronic subscriptions to Inside USEPA Weekly Report and Daily Environmental Report

As a portal to other systems, DENIX users can also access several environmental technical information services systems: Computer-aided Environmental Legislation Database, Hazardous Materials Management System, Environmental Statutory Database, Economic Impact Forecast System, Cultural Resources Information Bulletin Board, Hazardous Expertise Knowledge-based System, Regulations and Compliance Expertise, and Discuss with Experts Environmental Problems.

USACERL is currently working on initiating a monthly summary of pending environmental legislation, an on-line user's manual, on-line regulations (AR 200-1, AR 200-2 and Codes of Federal Regulations, and access to the TANKMAN and Environmental Compliance Assessment System databases.

7.8 RESTORATION MANAGEMENT INFORMATION SYSTEM (RMIS)

The RMIS, formerly the Defense Environmental Restoration Program Management Information System (DERPMIS), is a centralized repository for information on DoD environmental restoration activities at active military installations. The database consists of more than 10,000 Army site records, each with over 100 fields of information including site names and descriptions, phase and status of the IRP and/or Base Realignment and Closure (BRAC) activities at a particular site. The RMIS data for the Army is managed by the USAEC.

DoD uses the information in RMIS primarily to provide a status report on the DERP in the Annual Report to Congress. The Army uses RMIS information to report DERP status at the quarterly In-Progress-Reviews.

RMIS data requires periodic updating. The primary update is in the first quarter of the fiscal year, which is used for the Annual Report to Congress. Other updates occur as needed. For each scheduled update RMIS Site Data Forms are sent to MACOMs for distribution to their installations. Executing agencies should support installations in updating the RMIS. Installations send their updated RMIS data to their MACOM for submittal to the USAEC.

An automated installation version of RMIS is being developed at the USAEC. Once this system is available, the RMIS will be updated by installations on a quarterly basis.

7.9 INSTALLATION RESTORATION DATA MANAGEMENT SYSTEM

The Installation Restoration Data Management Information System (IRDMIS) is the ultimate repository of data collected in support of the Installation Restoration and Base Closure activities of USAEC. Users at USAEC, and consulting firms across the country, interface with the system through IBM-compatible PCs and Silicon Graphics work stations. This database was created specifically for the purpose of managing chemical analyses data and geotechnical data pertaining to well construction and groundwater elevation.

USAEC provides a Quality Assurance (QA) program to laboratories and contractors supplying chemical analysis or geotechnical information to the IRDMIS, which also has a QA program for data integrity. Positional data on soil sampling sites, wells, etc., is maintained in the IRDMIS in addition to well construction and groundwater elevation data.

IRDMIS contains many analytical tools that enable two- and three-dimensional plotting capabilities, time vs. concentration graphs, and general locational mapping capabilities.

The program has undergone several updates since it began in 1975 and currently maintains approximately 6 million records from roughly 100 installations across the United States. At the present time, the data base grows at a rate of 30,000 records a month. The system is physically co-located with USAEC on the Edgewood Area of Aberdeen Proving Ground, Maryland.

7.10 ANNUAL REPORT TO CONGRESS

The DoD submits an annual Report to Congress that describes DERP accomplishments during the previous fiscal year. The report is required by Section 120 (e)(5) of the SARA, which applies to all Federal facilities, and Section 211 of the SARA which pertains to the DERP. The report includes, but is not limited to the following items:

- Success stories highlighting significant DERP project activities to clean up sites and reduce risk to human health and the environment.

- A listing by state of the number of NPL and non-NPL sites under the jurisdiction of the DoD at which hazardous substances have been identified.

- A narrative summary for each NPL installation including action dates, contaminants, funding, and a description and status of studies and cleanup activities.

- A report on IAG status for NPL installations, including:

  - a summary of public comments received;
  - a description of the instances in which no agreement was reached; and
  - cost estimates and budgetary proposals for each IAG.

The USAEC is responsible for coordinating the Army's input to the Annual Report. Preparation of the report occurs in the first and second quarter of each fiscal year, with submittal to Congress and distribution to States and the public at the end of the second quarter.

A major source of information to the Annual Report is the RMIS. It is important that installations update their RMIS data on a regular basis and maintain accurate records of DERP activities in order to respond to requests for information.

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GLOSSARY

Administrative Record - Compilation of documents that records the decision-making process regarding the selection of a response action to be taken at a site.

Applicable Requirements - Cleanup standards, standards of control and other substantive environmental protection requirements, criteria or limitations promulgated under Federal or State law that specifically address a hazardous substance, pollutant, contaminant, remedial action, location or other circumstances at a CERCLA site.

Baseline Risk Assessment - An evaluation of the potential threat to human health and the environment in the absence of any remedial action at a site.

BRAC - The environmental restoration portion of the Base Realignment and Closure Program (BRAC) was established to help identify, investigate, and cleanup contamination on installations identified for sale under the auspices of the Base Closure and Realignment Commission Report of December 1988. The process consists of the same three phases as the IRP:
PA/SI - to identify potential sites with hazardous waste contamination;
RI/FS - to determine the nature and extent of contamination at a site and to identify alternatives/recommend the best strategy for remediation or cleanup; and
RD/RA - to implement any remediation necessary prior to sale.
However, the BRAC environmental restoration program differs from the IRP since it also evaluates additional environmental issues such as asbestos, radon, transformers and underground storage tanks which must be addressed prior to transfer of property.

Bench Studies - Treatability tests performed on a small scale, usually in a laboratory, to better define parameters of a treatment technology.

CERCLA - Comprehensive Environmental Response, Compensation and Liability Act of 1980, also known as "Superfund." Amended in 1986 by the Superfund Amendments and Reauthorization Act.

Community Relations Plan - Document based on community interviews that specifies the community relations activities that the Army expects to undertake during a response action.

Competitive Evaluation Plan - A plan which describes how technical proposals submitted by potential contractors will be evaluated.

Contracting Officer - Individual with the authority to enter into, administer and/or terminate contracts and make related determinations and findings.

Contracting Officer's Representative - Individual trained to prepare procurement requests and monitor contractor performance. The Contracting Officer's Representative is not authorized to sign contracts or to make changes and modifications to a contract.

Data Quality Objectives - Quantitative and qualitative statements that specify the data needed to support decisions regarding remedial response activities.

Decision Document - Documentation of response action decisions for all actions at non-National Priorities List Sites and for interim response actions at National Priorities List sites.

Defense Environmental Restoration Account - A transfer account, established by the Defense Appropriation Act of 1984, that funds the Installation Restoration Program for active installations and the Formerly Used Defense Sites Program for formerly owned or used installations. The account also funds the other goals of the Defense Environmental Restoration Program.

Defense Environmental Restoration Program - Provides centralized program management for the cleanup of DoD hazardous waste sites consistent with the provisions of CERCLA. The goals of the program are: (1) the identification, investigation, research and development and cleanup of contamination from hazardous substances, pollutants and contaminants, (2) correction of other environmental damage which creates an imminent and substantial endangerment to the public health, welfare or to the environment and (3) demolition and removal of unsafe buildings and structures.

Executing Agency - The agency responsible for administering IRP activities for a site or installation.

Facility (as stated in CERCLA) - Any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, aircraft or any site or area where a hazardous substance has been deposited, stored, disposed of, placed or otherwise come to be located; but does not include any consumer product in consumer use or any vessel.

Facility (as stated in this Guidance) - This term has been replaced by the terms "installation" and "site." See Section I. D.

Feasibility Study - A study undertaken to develop and evaluate alternatives for remedial action.

Federal Agency Hazardous Waste Compliance Docket - A list, maintained by the U.S. Environmental Protection Agency of Federal hazardous waste treatment, storage, disposal and spill sites. The Docket includes information submitted by Army installations under Sections 3005, 3010, and 3016 of the Solid Waste Disposal Act and Sections 103 and 120 of CERCLA.

Field Sampling Plan - Document that provides guidance for all field work by defining in detail the sampling and data-gathering methods to be used on a project. Part of the Sampling and Analysis Plan that is prepared prior to any non-emergency site sampling activities.

Hazard Ranking System - Method used by the U.S. Environmental Protection Agency to identify sites for inclusion on the National Priorities List, and to prioritize National Priorities List sites for funding by Superfund.

Hazardous Substance (as stated in CERCLA) - Any substance designated pursuant to Section 311(b)(2)(A) of the Clean Water Act; any element, compound, mixture, solution or substance designated pursuant to Section 102 of CERCLA; any hazardous wastes having the characteristics identified under or listed pursuant to Section 3001 of the Solid Waste Disposal Act (but not including any waste the regulation of which under the Solid Waste Disposal Act has been suspended by Act of Congress); any toxic pollutant listed under Section 307(a) of the Clean Water Act; any hazardous air pollutant listed under Section 112 of the Clean Air Act; and any imminently hazardous chemical substance or mixture with respect to which the EPA Administrator has taken action pursuant to Section 7 of the Toxic Substances Control Act. The term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance in the first sentence of this paragraph, and the term does not include natural gas, natural gas liquids, liquified natural gas or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas.)

Health Assessment - Assessment of existing risk to human health posed by National Priorities List sites, prepared by the Agency for Toxic Substances and Disease Registry.

Imminent Threat - For the purposes of the Army IRP, a threat is imminent if human exposure in excess of applicable human health criteria is predictable prior to implementation of an effective final remedial action or operable unit.

Information Repository - Place where documents and information pertaining to response action sites will be stored and made available for public inspection and copying.

Installation - The real property owned or leased by the Army including a main base and any associated real properties under the control of an Installation Commander.

Interagency Agreement - Written agreement between the Army and the U.S. Environmental Protection Agency required in conjunction with selection of remedial actions for sites that are on the National Priorities List and for sites that caused an installation to be listed. The agreement includes a schedule for completion of each remedial action and arrangements for long-term operation and maintenance of the site.

Management of Migration - Actions that are taken to minimize and mitigate the migration of hazardous substances, pollutants or contaminants and the effects of such migration. Measures may include, but are not limited to, provision of alternative water supplies, management of a plume of contamination or restoration of a drinking water aquifer.

National Contingency Plan - Plan established by CERCLA that provides for efficient, coordinated and effective response to discharges of oil and releases of hazardous substances, pollutants and contaminants in accordance with CERCLA and the Clean Water Act. Its full title is "National Oil and Hazardous Substance Pollution Control Plan" and is found at 40 CFR 300.

National Priorities List - A list, compiled by the U.S. Environmental Protection Agency, of high priority sites, identified primarily by Hazard Ranking System score, for remediation under CERCLA.

Operable Unit (as stated in the National Contingency Plan) - A discrete portion of a remedial response that by itself eliminates or mitigates a release, threat of a release or pathway of exposure and that requires no additional action to accomplish its objective. The cleanup of a site can be divided into a number of operable units, depending on the complexity of the problems associated with the site. Operable units may consist of any set of actions performed over time or any actions that are concurrent but located in different parts of a site.

Operation and Maintenance (O&M) - Activities required to maintain the effectiveness of response actions.

On-Scene Coordinator (as stated in the National Contingency Plan) - Federal official predesignated by the U.S. Environmental Protection Agency or the U.S. Coast Guard to coordinate and direct Federal responses under Subpart D (Operational Response Phases for Oil Removal), or the official designated by the lead agency to coordinate and direct removal actions under Subpart E (Hazardous Substance Response), of the National Contingency Plan.

Pilot Studies - Treatability tests performed on a large scale to simulate the physical, as well as chemical, parameters of a treatment process.

Pollutant and Contaminant (as stated in the National Contingency Plan) - Any element, substance, compound or mixture, including disease-causing agents, which after release into the environment and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring. The term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under Section 101(14)(a) through (f) of CERCLA, nor does it include natural gas, liquified natural gas or synthetic gas of pipeline quality (or mixtures of natural gas and such synthetic gas). For purposes of Subpart E (Hazardous Substance Response) of the National Contingency Plan, the term pollutant or contaminant means any pollutant or contaminant that may present an imminent and substantial danger to public health or welfare.

Potency Factor - The lifetime cancer risk for each additional mg/kg body weight per day of exposure.

Potentially Responsible Party - Current and former owners or operators and persons who may be accountable for having generated hazardous substances or were involved in transport, treatment or disposal of hazardous substances at a site under litigation.

Preliminary Assessment - Initial analysis of existing information to determine if a release may require additional investigation or action.

Procurement Request - Written justification for securing contract services.

Project Officer - Individual that develops the Procurement Request, in this Guidance considered to be the same person as the Contracting Officer's Representative.

Quality Assurance Project Plan (as stated in the National Contingency Plan) - A written document, associated with remedial site sampling activities, which presents in specific terms the organization (where applicable), objectives, functional activities, and specific quality assurance and quality control activities designed to achieve the data quality goals of a specific project or continuing operation. The quality assurance project plan is prepared for each specific project or continuing operation (or group of similar projects or continuing operations). Part of the Sampling and Analysis Plan that is prepared prior to any non-emergency site sampling activities.

Record of Decision - Documentation of a final remedial response action decision at a National Priorities List site.

Reference Dose - For noncarcinogenic effects, the amount of a chemical that can be taken into the body each day over a lifetime without causing adverse effects.

Release (as stated in CERCLA) - Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment (including the abandonment or discarding of barrels, containers and other closed receptacles containing any hazardous substance or pollutant or contaminant), but excludes (A) any release which results in exposure to persons solely within a workplace, with respect to a claim which such persons may assert against the employer of such persons, (B) emissions from the engine exhaust of a motor vehicle, rolling stock, aircraft, vessel, or pipeline pumping station engine, (C) release of source, byproduct, or special nuclear material from a nuclear incident, as those terms are defined in the Atomic Energy Act of 1954, if such release is subject to requirements with respect to financial protection established by the Nuclear Regulatory Commission under Section 170 of such Act or, for the purposes of Section 104 of this title or any other response action, any release of source byproduct, or special nuclear material from any processing site designated under Section 102(a)(1) or 302(a) of the Uranium Mill Tailings Radiation Control Act of 1978, and (D) the normal application of fertilizer.

Relevant and Appropriate Requirements - Cleanup standards, standards of control and other substantive environmental protection requirements, criteria or limitations promulgated under Federal or State law, while not applicable to a hazardous substance, pollutant, contaminant, remedial action, location or other circumstances at a site, address problems or situations sufficiently similar to those encountered at the site that their use is well suited to the particular site.

Remedial Action or Remedy (as stated in CERCLA) - Actions consistent with permanent remedy taken instead of or in addition to removal actions in the event of a release or threatened release of a hazardous substance into the environment, to prevent or minimize the release of hazardous substances so that they do not migrate to cause substantial danger to present or future public health or welfare or the environment. The term includes, but is not limited to, such actions at the location of the release as storage, confinement, perimeter protection using dikes, trenches, or ditches, clay cover, neutralization, cleanup of released hazardous substances and associated contaminated materials, recycling or reuse, diversion, destruction, segregation of reactive wastes, dredging or excavations, repair or replacement of leaking containers, collection of leachate and runoff, on-site treatment or incineration, provision of alternative water supplies and any monitoring reasonably required to assure that such actions protect the public health and welfare and the environment. The term includes the costs of permanent relocation of residents and businesses and community facilities where the President determines that, alone or in combination with other measures, such relocation is more cost-effective than and environmentally preferable to the transportation, storage, treatment, destruction or secure disposition off site of hazardous substances, or may otherwise be necessary to protect the public health or welfare; the term includes off site transport and off site storage, treatment, destruction, or secure disposition of hazardous substances and associated contaminated materials.

Remedial Action Process - Identification, evaluation, decision-making and design and construction steps required to implement control measures. The remedial action process may lead to remedial actions, removals or decisions to take no further action.

Remedial Design - Technical analysis and procedures which follow the selection of remedy for a site and result in a detailed set of plans and specifications for implementation of the remedial action.

Remedial Investigation - Process undertaken to determine the nature and extent of the problem presented by a release which emphasizes data collection and site characterization. The remedial investigation is generally performed concurrently and in an interdependent fashion with the feasibility study.

Removal (as stated in CERCLA) - The cleanup or removal of released hazardous substances from the environment, such actions as may be necessary taken in the event of the threat of release of hazardous substances into the environment, such actions may be necessary to monitor, assess and evaluate the release or threat of release of hazardous substances, the disposal of removal material, or the taking of such other actions as may be necessary to prevent, minimize or mitigate damage to the public health or welfare or to the environment, which may otherwise result from a release or threat of release. The term includes, in addition, without being limited to, security fencing or other measures to limit access, provision of alternative water supplies, temporary evacuation and housing of threatened individuals not otherwise provided for, action taken under Section 104(b) of this Act and any emergency assistance which may be provided under the Disaster Relief Act of 1974.

Response - Action to remove, or undertake a removal, remedy or remedial action, including related enforcement activities.

Sampling and Analysis Plan - Document composed of a Quality Assurance Project Plan and Field Sampling Plan that is prepared prior to site sampling activities.

Site (as stated in this Guidance) - A location on an installation where hazardous wastes have been stored, disposed, spilled or otherwise released to the environment. A site includes land and water resources where they are contaminated by the release, and it includes any structures, earth works or equipment that are clearly associated with the release. Where multiple sites may contribute to contamination of an aquifer or a common land area, the contaminated resource may be identified as a site that is distinguished from the sites where the releases occurred. A site is the basic unit for planning and implementing response actions.

Site Health and Safety Plan - Document that specifies policies and procedures for ensuring the health and safety of personnel working at a site.

Site Inspection - On-site inspection to determine whether there is a release or potential release and the nature of the associated threats. The purpose is to augment the data collected in the preliminary assessment and to generate, if necessary, sampling and other field data to determine if further action or investigation is appropriate.

Source Control - Actions that either remove the source of contamination off-site or effectively contain it on-site so that continuing releases are prevented or reduced.

Technical Review Committee - Committee composed of Army and EPA officials, State and local authorities and a public representative of the potentially affected community that reviews and comments on response actions and proposed actions at Army sites on or proposed for the National Priorities List or other major sites (sites that present a significant threat to human health, welfare or the environment or cause public controversy).

Third Party Site - Privately or municipally owned storage, treatment and disposal sites that received hazardous wastes either from disposal contractors hired by the Army or directly from the Army. The Army, as a potentially responsible party, is designated as the third party in cases where enforcement actions to recover costs of cleanup is initiated. EPA, as the first party, cannot sue the Army to recover such costs, but non-Federal potentially responsible parties, as the second party, can.

To Be Considered Requirements - Non-promulgated advisories (such as reference doses or potency factors), criteria and guidance issued by Federal and State governments that are identified to supplement applicable or relevant and appropriate requirements.

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAR 15 1989

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Transmittal of Workgroup's Suggested Modifications to DOD - EPA Model IAG Language

FROM: Bruce M. Diamond, Director
Office of Waste Programs Enforcement

TO: Waste Management Division Directors
Regional Counsels
Regions I - X

As you know, EPA reached agreement with the Department of Energy (DOE) (see Memorandum dated May 27, 1988), and the Department of Defense (DOD) (see Memorandum dated June 17, 1988), regarding model language to be utilized in CERCLA cleanup agreements known as IAGs. The model language was developed without direct state participation. This was necessary to allow DOE/DOD and EPA to resolve many of the significant inter-agency and intra-executive issues associated with the cleanup of Federal facilities under CERCLA.

DOD and EPA initially determined that it would be unworkable to bring in representatives from the fifty states, or some negotiating team representing the states, in the short period it was expected to take to develop the model language. Although development of the model language took substantially longer than initially expected, states were never invited to participate in the initial development of the model language. However, DOD, DOE and EPA clearly recognized the importance of state participation in the CERCLA process. This included unanimous agreement that state issues and state concerns must be addressed at site-specific negotiations, with changes made to the model language as necessary to accommodate reasonable state issues and concerns.

To facilitate a dialogue on significant Federal facility issues, including IAG-specific issues, EPA initiated a Workgroup among representatives of EPA, the National Association of Attorneys General, the Association of State and Territorial Waste Management Officials, and the National Governors Association. The state participants in the Workgroup determined that it would be helpful to negotiate and reach agreement with DOD on specific changes to the model language to address certain state issues and concerns. The product of these negotiations, a package of mutually acceptable changes to the model language, is attached to this memorandum.

We have reviewed the attached package and have determined that if any or all of the changes set forth in the package are requested by a State in the context of site-specific negotiations, these changes are acceptable to EPA. We have agreed to accept these changes in advance in an attempt to further expedite the development of three-party IAGs. However, our acceptance of the attached package should not be construed to limit a state's options; the development of this language should not preclude, or in any way affect, the ability or right of a state to request additional or different modifications to the DOD - EPA model language to address legitimate state issues or concerns.

Please continue to work with the states to develop acceptable site-specific three-party IAGs. We hope that the attached language facilitates your settlement efforts.

Finally, I have attached copies of the memoranda from the State organizations to their member states and from DOD to the military services transmitting the suggested modifications to the model language. These memoranda are attached to provide added perspective with regard to the suggested modifications to the model language.

Attachment

THE OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301-8000

MAR 1 7 1989

PRODUCTION AND
LOGISTICS

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MEMORANDUM FOR DEPUTY FOR ENVIRONMENT, SAFETY AND OCCUPATIONAL HEALTH, OASA (I&L)
DEPUTY DIRECTOR FOR ENVIRONMENT, OASN (S&L)
DEPUTY ASSISTANT SECRETARY OF THE AIR FORCE, (E,S&OH) SAF/RQ
DIRECTOR, DEFENSE LOGISITICS AGENCY (DLA-W)

SUBJECT: Suggested IAG Language from the State and Federal Agency Workgroup

Over the last three months, DoD representatives met with State organizations to develop acceptable state language on matters covered in the original model IAG language that we agreed to with the Environmental Protection Agency for National Priority List Sites. Representatives of the National Association of Attorneys General, the Association of State and Territorial Solid Waste Management Officials, and the National Governors' Association worked with us.

On all but the force majeure and stipulated penalties provisions, we reached agreement with the state organizations on changes to the DoD-EPA model language. EPA also accepts the use of this language in agreements. A copy of this agreed upon language is attached. The DoD components should accept without reservation a state's use of all, or any subset of these provisions in the IAG negotiations. They are a reasonable accommodation of our mutual interests to provide meaningful state participation in our cleanup activities. Their direct use should facilitate the negotiations.

The above state associations are informing their members that the attached provisions are a way to soundly handle the matters that they cover and that DoD and EPA will accept them. This should promote individual state use. However, they cannot bind their member states. You may find some states asking for more favorable language to their interests on these IAG provisions. In those instances, you should feel free to discuss revisions that you would like, also. Installation negotiators

should continue to consider any additional state concerns on these provisions and evaluate their reasonableness in the context of the entire IAG negotiations. The negotiators should continue to follow existing Service guidance on stipulated penalties and force majeure.

William H. Parker, III, P.E.
Deputy Assistant Secretary of Defense
(Environment)

Attachment

March 17. 1989

MEMORANDUM

TO: Governors
State Attorneys General
State Assistant Attorneys General
State Superfund Program Managers

FROM: Ray Scheppach. Executive Director
National Governors' Association

Christine T. Milliken. Executive Director and General Counsel.
National Association of Attorneys General

Tom Kennedy, Executive Director.
Association of State and Territorial Solid Waste Management Officials

RE: Suggested language for three party Federal Facility Interagency Agreements for National Priority List (NPL) sites

Enclosed for your information and reference is suggested language for a three party–state, U.S. Environmental Protection Agency (EPA), and U.S. Department of Defense (DOD)–Interagency Agreement (IAG) intended to enable DOD facilities to obtain compliance with CERCLA and applicable state laws. This agreement should facilitate negotiations among the three parties when Superfund actions are taken or anticipated at DOD installations. It was developed by staff of the National Governors' Association (NGA), the National Association of Attorneys General (NAAG), the Association of State and Territorial Solid Waste Management Officials (ASTSWMO), state officials from California. Colorado. Ohio. Maine. Minnesota. Washington. Illinois. Arizona. and DOD representatives. The three associations and state representatives undertook this effort as part of a larger effort to involve states in the implementation of The Superfund Amendments and Reauthorization Act of 1986 (SARA).

The enclosed suggested language revises the two party EPA/DOD Section 120 model IAG developed last year to incorporate a number of state concerns. The majority of language additions were made to reflect the state's participation as a party to these agreements. While many issues are addressed. not all key provisions which are subject to negotiation are included. Although the suggested language reflects the consensus of the workgroup there was not unanimous consent on the wording of each provision. Further. the language was developed in the absence of site specific issues and the history of any one facility. Therefore. we recognize that this language may not be acceptable to all fifty states or be applicable to all sites within a state.

Should a state choose. however, to use this IAG as written. both EPA and DOD will accept it without reservation. The suggested language is an attempt to write language which in whole and part can be useful to the greatest number of states at the greatest possible number of DOD facilities. It is our expectation that the enclosure will provide a basis for the initiation of negotiations and lead to expedited site-specific agreements.

Although the suggested language covers a range of subjects. there are two issues which are in the DOD/EPA model agreement that are not part of the enclosure. In addition there are other provisions

which are not reflected in either the DOD/EPA agreement or the state/EPA/DOD suggested language that are typically found in state agreements. The two issues not in the enclosure are force majeure and stipulated penalties. The state representatives felt the language provided by DOD on force majeure was too broad. With regard to stipulated penalties, the central issue is the ability of states to invoke penalties against federal facilities. Because no agreements were reached on these issues they were deleted. These issues may be resolved as necessary in individual IAG negotiations.

The enclosed suggested language does not deal with the reimbursement of state costs associated with participating in remedial actions at DOD installations. Separate discussions between the states and DOD are proceeding to establish a nationwide process for paying these costs. While the cost issues are being worked out, DOD has agreed to two options for dealing with the reimbursement of state costs. One option is to reserve the cost issue pending the completion of discussions between the states and DOD at the national level. The second option DOD may exercise is to pay state costs through individual installation agreements. At least two recent DOD/state agreements have included payment of state costs but only for a two year period with a clause to reopen the agreement upon completion of the state/DOD discussions. The state associations will update the states on the progress of discussions with DOD on the cost issue.

It is our hope that the enclosure will help facilitate and encourage successful negotiation of agreements at DOD installations. Also enclosed for your review are both DOD's and EPA's communications to their installations and regional offices regarding this effort. Should you have any questions please do not hesitate to contact Chris O'Donnell, NGA, 202/624-7871, Herb Johnson, NAAG, 202/628-6031 or Connie Saulter, ASTSWMO, 202/624-5828.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION _____,

STATE OF _____,

AND THE

UNITED STATES [DOD COMPONENT]

IN THE MATTER OF:	)	
	)	
THE U.S. [DOD COMPONENT'S]	)	FEDERAL FACILITY
	)	AGREEMENT UNDER
<NAME OF FACILITY>	)	CERCLA SECTION 120
	)	
	)	Administrative
	)	Docket Number:

Based on the information available to the Parties on the effective date of this FEDERAL FACILITY AGREEMENT (Agreement), and without trial or adjudication of any issues of fact or law, the Parties agree as follows:

JURISDICTION

Each Party is entering into this Agreement pursuant to the following authorities:

(i) The U.S. Environmental Protection Agency (U.S. EPA), Region <>, enters into those portions of this Agreement that relate to the remedial investigation/feasibility study (RI/FS) pursuant to Section 120(e)(1) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9620(e)(1), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), Pub. L. 99-499 (hereinafter jointly referred to as CERCLA/SARA or CERCLA) and [Sections 6001, 3008(h) and 3004(u) and (v) of] the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. [§§ 6961, 6928(h), 6924(u) and (v),] as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA)(hereinafter jointly referred to as RCRA/HSWA or RCRA) and Executive Order 12580;

(ii) U.S. EPA, Region <>, enters into those portions of this Agreement that relate to interim remedial actions and final remedial actions pursuant to Section 120(e)(2) of CERCLA/SARA, [Sections 6001, 3008(h) and 3004(u) and (v) of] RCRA and Executive Order 12580;

(iii) The [DOD Component] enters into those portions of this Agreement that relate to the RI/FS pursuant to Section 120(e)(1) of CERCLA, [Sections 6001, 3008(h) and 3004(u) and(v) of] RCRA, Executive Order 12580, the National Environmental Policy Act, 42 U.S.C. § 4321, and the Defense Environmental Restoration Program (DERP), 10 U.S.C. § 2701 et seq.;

(iv) The [DOD Component] enters into those portions of this Agreement that relate to interim remedial actions and final remedial actions pursuant to Section 120(e)(2) of CERCLA/SARA, [Sections 6001, 3004(u) and 3008(h) of] RCRA, Executive Order 12580 and the DERP.

(v) The [State] enters into this Agreement pursuant to sections 120(f) and 121(f) CERCLA/SARA, 42 U.S.C. §§ 9620(f) and 9621(f), section 3006 of RCRA, 42 U.S.C. § 6926, and [cite any applicable state law].

PURPOSE

A. The general purposes of this Agreement are to:

(1) ensure that the environmental impacts associated with past and present activities at the Site are thoroughly investigated and appropriate remedial action taken as necessary to protect the public health, welfare and the environment;

(2) establish a procedural framework and schedule for developing, implementing and monitoring appropriate response actions at the Site in accordance with CERCLA/SARA, the NCP, Superfund guidance and policy, RCRA, RCRA guidance and policy, and applicable state law; and,

(3) facilitate cooperation, exchange of information and participation of the Parties in such actions.

B. Specifically, the purposes of this Agreement are to:

(1) Identify Interim Remedial Action (IRA) alternatives which are appropriate at the Site prior to the implementation of final remedial action(s) for the Site. IRA alternatives shall be identified and proposed to the Parties as early as possible prior to formal proposal of IRAs to U.S. EPA and [the State] pursuant to CERCLA/SARA and applicable state law. This process is designed to promote cooperation among the Parties in identifying IRA alternatives prior to selection of final IRAs.

(2) Establish requirements for the performance of a RI to determine fully the nature and extent of the threat to the public health or welfare or the environment caused by the

release and threatened release of hazardous substances, pollutants or contaminants at the Site and to establish requirements for the performance of a FS for the Site to identify, evaluate, and select alternatives for the appropriate remedial action(s) to prevent, mitigate, or abate the release or threatened release of hazardous substances, pollutants or contaminants at the Site in accordance with CERCLA/SARA and applicable state law.

(3) Identify the nature, objective and schedule of response actions to be taken at the Site. Response actions at the Site shall attain that degree of cleanup of hazardous substances, pollutants or contaminants mandated by CERCLA/SARA and applicable state law.

(4) Implement the selected interim and final remedial action(s) in accordance with CERCLA and applicable state law and meet the requirements of Section 120(e)(2) of CERCLA for an interagency agreement ~~between~~ among ~~U.S. EPA and the [DOD Component]~~ the parties.

(5) Assure compliance, through this Agreement, with RCRA and other federal and state hazardous waste laws and regulations for matters covered herein.

(6) Coordinate response actions at the Site with the mission and support activities at [installation].

(7) Expedite the cleanup process [including, at site-specific negotiations, shortening the time frames specified in these model provisions] to the extent consistent with protection of human health and the environment.

(8) Provide [State] involvement in the initiation, development, selection and enforcement of remedial actions to be undertaken at [installation], including the review of all applicable data as it becomes available and the development of studies, reports, and action plans; and to identify and integrate State ARARs into the remedial action process.

(9) Provide for operation and maintenance of any remedial action selected and implemented pursuant to this Agreement.

SCOPE OF AGREEMENT

[The purpose of this section is to identify the units which are to be addressed by the agreement and the units which will be excluded from the agreement that will be addressed by other authority, if any. At some installations it will be appropriate to cover all of the hazardous waste releases under this agreement while at others it may not be appropriate. Where all releases are covered, there are two options. First, the parties may agree to have all units, including non-NPL and RCRA units, covered by the section 120 decisionmaking process set out in this document. The second option would be to include in an agreement a separate decisionmaking process for the non-NPL and RCRA units. Since the terms of this section will vary widely from site to site, no attempt is made to provide model language.]

STATUTORY COMPLIANCE/RCRA-CERCLA INTEGRATION

A. The Parties intend to integrate the [DOD Component]'s CERCLA response obligations and RCRA corrective action obligations which relate to the release(s) of hazardous substances, hazardous wastes, pollutants or contaminants covered by this Agreement into this comprehensive Agreement. Therefore, the Parties intend that activities covered by this agreement will ~~be-deemed-to~~ achieve compliance with CERCLA, 42 U.S.C. § 9601 et seq.; ~~to~~ satisfy the corrective action requirements of Sections 3004(u) and (v) of RCRA, 42 U.S.C. § 6924(u) and (v), for a RCRA permit, and Section 3008(h), 42 U.S.C. § 6928(h), for interim status facilities; and ~~to~~ meet or exceed all applicable or relevant and appropriate Federal and State laws and regulations, to the extent required by Section 121 of CERCLA, 42 U.S.C. § 9621 and applicable state law.

B. Based upon the foregoing, the Parties intend that any remedial action selected, implemented and completed under this Agreement ~~shall-be-deemed-by-the-Parties-to~~ will be protective of human health and the environment such that remediation of releases covered by this Agreement shall obviate the need for further corrective action under RCRA (i.e., no further corrective action shall be required). The Parties agree that with respect to releases of hazardous waste covered by this Agreement ~~that are~~ associated with the NPL portions of the site, RCRA shall be

considered an applicable or relevant and appropriate requirement pursuant to Section 121 of CERCLA. [Releases or other hazardous waste activities not covered by this Agreement remain subject to all applicable state and federal environmental requirements.]

C. The Parties recognize that the requirement to obtain permits for response actions undertaken pursuant to this Agreement shall be as provided for in CERCLA and the NCP. The Parties further recognize that on-going hazardous waste management activities at the [installation] may require the issuance of permits under Federal and State laws. This Agreement does not affect the requirements, if any, to obtain such permits. However, if a permit is issued to the [DOD Component] for on-going hazardous waste management activities at the Site, U.S. EPA and, or [the State] shall reference and incorporate any appropriate provisions, including appropriate schedules (and the provision for extension of such schedules), of this Agreement into such permit.

~~The Parties intend that the judicial review of any permit conditions which reference this agreement~~ With respect to those portions of this Agreement incorporated by reference into permits, the parties intend that judicial review of the incorporated portions shall, to the extent review is authorized by law, only occur under the provisions of CERCLA.

D. Nothing in this Agreement shall alter the [DOD Component]'s authority with respect to removal actions conducted pursuant to Section 104 of CERCLA, 42 U.S.C. § 9604.

CONSULTATION WITH U.S. EPA AND THE

STATE OF [ ]

Review and Comment Process for Draft and Final Comments

A. Applicability:

The provisions of this Part establish the procedures that shall be used by the Parties ~~[DOD Component] and U.S. EPA~~ to provide ~~the Parties~~ each other with appropriate notice, review, comment, and response to comments regarding RI/FS and RD/RA documents, specified herein as either primary or secondary documents. In accordance with Section 120 of CERCLA and 10 U.S.C. § 2705, the [DOD Component] will normally be responsible for issuing primary and secondary documents to U.S. EPA and [the State]. As of the effective date of this Agreement, all draft and final reports for any deliverable document identified herein shall be prepared, distributed and subject to dispute in accordance with Paragraphs B through J below.

The designation of a document as "draft" or "final" is solely for purposes of consultation with U.S. EPA and [the State] in accordance with this Part. Such designation does not affect the obligation of the Parties to issue documents, which may be referred to herein as "final", to the public for review and comment as appropriate and as required by law.

B. General Process for RI/FS and RD/RA documents:

1. Primary documents include those reports that are major, discrete portions of RI/FS or RD/RA activities. Primary

documents are initially issued by the [DOD Component] in draft subject to review and comment by U.S. EPA and [the State]. Following receipt of comments on a particular draft primary document, the [DOD Component] will respond to the comments received and issue a draft final primary document subject to dispute resolution. The draft final primary document will become the final primary document ~~either~~ 30 days after issuance ~~the period established for review of a draft final document~~ if dispute resolution is not invoked or as modified by decision of the dispute resolution process.

2. Secondary documents include those reports that are discrete portions of the primary documents and are typically input or feeder documents. Secondary documents are issued by the [DOD Component] in draft subject to review and comment by U.S. EPA and [the State]. Although the [DOD Component] will respond to comments received, the draft secondary documents may be finalized in the context of the corresponding draft final primary document is issued.

C. Primary Reports:

1. The [DOD Component] shall complete and transmit draft reports for the following primary documents to U.S. EPA and [the State] for review and comment in accordance with the provisions of this Part:

[Note: The list set forth below represents potential primary documents and the type of information that typically would be generated during a CERCLA cleanup at an NPL site. This list, and the list below of secondary documents, includes

discrete portions of the RI/FS or RD/RA and are subject to change in accordance with the NCP, [DOD Component] and U.S. EPA guidance, and site specific requirements. In practice, the documents will also vary with scope and nature of the project, and may either be combined or broken out into separate volumes.]

1. [Scope of Work]

2. [RI/FS Work Plan, including Sampling and Analysis Plan and QAPP]

3. [Risk Assessment]

4. [Site Characterization Report]

5. [Initial Screening of Alternatives]

6. [Treatability Studies Report and, Additional Site Characterization Report 2]

7. [Detailed Anaylsis of Alternatives]

8. [Proposed Plan]

9. [Record of Decision]

10. [Remedial Design]

11. [Remedial Action Work Plan]

2. Only the draft final reports for the primary documents identified above shall be subject to dispute resolution. The [DOD Component] shall complete and transmit draft primary documents in accordance with the timetable and deadlines established in Part ___ (Deadlines) of this Agreement.

D. Secondary Documents:

1. The [DOD Component] shall complete and transmit draft reports for the following secondary documents to U.S. EPA and [the State] for review and comment in accordance with the provisions of this Part:

1. [Initial Remedial Action/Data Quality Objectives]

2. [Post-screening Investigation Work Plan]

3. [Sampling and Data Results]

2. Although U.S. EPA and [the State] may comment on the draft reports for the secondary documents listed above, such documents shall not be subject to dispute resolution except as provided by paragraph B hereof. Target dates shall be established for the completion and transmission of draft secondary reports pursuant to Part ___ (**Deadlines**) of this Agreement.

E. Meetings of the Project Managers on Development of Reports:

The Project Managers shall meet approximately every [30] days, except as otherwise agreed by the Parties, to review and discuss the progress of work being performed at the site on the primary and secondary documents. Prior to preparing any draft report specified in Paragraphs C and D above, the Project Managers shall meet to discuss the report results in an effort to reach a common understanding, to the maximum extent practicable, with respect to the results to be presented in the draft report.

F. Identification and Determination of Potential ARARs:

1. For those primary reports or secondary documents that consist of or include ARAR determinations, the Project Managers shall meet prior to the issuance of a draft report, to identify and propose, to the best of their ability, all potential ARARs pertinent to the report being addressed. **[The State] shall**

identify all potential state ARARs as early in the remedial process as possible consistent with the requirements of CERCLA section 121 and the NCP. The [DOD Component] shall consider any written interpretations of ARARs provided by the state. Draft ARAR determinations shall be prepared by the [DOD Component] in accordance with Section 121(d)(2) of CERCLA, the NCP and pertinent guidance issued by U.S. EPA~~, which~~ that is ~~not~~ inconsistent with CERCLA and the NCP.

2. In identifying potential ARARs, the Parties recognize that actual ARARs can be identified only on a site-specific basis and that ARARs depend on the specific hazardous substances, pollutants and contaminants at a site, the particular actions proposed as a remedy and the characteristics of a site. The Parties recognize that ARAR identification is necessarily an iterative process and that potential ARARs must be re-examined throughout the RI/FS process until a ROD is issued.

G. Review and comment on Draft Reports:

1. The [DOD Component] shall complete and transmit each draft primary report to U.S. EPA and [the State] on or before the corresponding deadline established for the issuance of the report. The [DOD Component] shall complete and transmit the draft secondary document in accordance with the target dates established for the issuance of such reports established pursuant to Part ____ (Deadlines) of this Agreement.

2. Unless the Parties mutually agree to another time period, all draft reports shall be subject to a 30-day period for review and comment. Review of any document by the U.S. EPA and

[the State] may concern all aspects of the report (including completeness) and should include, but is not limited to, technical evaluation of any aspect of the document, and consistency with CERCLA, the NCP and any pertinent guidance or policy ~~promulgated~~ issued by the U.S EPA, and with applicable state law. Comments by the U.S. EPA and [the State] shall be provided with adequate specificity so that that [DOD Component] may respond to the comment and, if appropriate, make changes to the draft report. Comments shall refer to any pertinent sources of authority or references upon which the comments are based, and, upon request of the [DOD Component], the U.S. EPA or [the State] shall provide a copy of the cited authority or reference. In cases involving complex or unusually lengthy reports, U.S. EPA or [the State] may extend the 30-day comment period for an additional 20 days by written notice to the [DOD Component] prior to the end of the 30-day period. On or before the close of the comment period, U.S. EPA and [the State] shall transmit by next day mail their written comments to the [DOD Component].

3. Representatives of the [DOD Component] shall make themselves readily available to U.S. EPA and [the State] during the comment period for purposes of informally responding to questions and comments on draft reports. Oral comments made during such discussions need not be the subject of a written response by the [DOD Component] on the close of the comment period.

4. In commenting on a draft report which contains a proposed ARAR determination, U.S. EPA or [the State] shall include a reasoned statement of whether they object to any

portion of the proposed ARAR determination. To the extent that U.S. EPA or [the State] does object, it shall explain the basis for its objection in detail and shall identify any ARARs which it believes were not properly addressed in the proposed ARAR determination.

5. Following the close of the comment period for a draft report, the [DOD Component] shall give full consideration to all written comments on the draft report submitted during the comment period. Within 30 days of the close of the comment period on a draft secondary report, the [DOD Component] shall transmit to U.S. EPA and [the State] its written response to comments received within the comment period. Within 30 days of the close of the comment period on a draft primary report, the [DOD Component] shall transmit to U.S. EPA and [the State] a draft final primary report, which shall include the [DOD Component]'s response to all written comments, received within the comment period. While the resulting draft final report shall be the responsibility of the [DOD Component], it shall be the product of consensus to the maximum extent possible.

6. The [DOD Component] may extend the 30-day period for either responding to comments on a draft report or for issuing the draft final primary report for an additional 20 days by providing notice to U.S. EPA and [the State]. In appropriate circumstances, this time period may be further extended in accordance with Part ___ (Extensions) hereof.

H. Availability of Dispute Resolution for Draft Final Primary .ocuments:

1. Dispute resolution shall be available to the Parties for draft final primary reports as set forth in Part ___ (Dispute Resolution).

2. When dispute resolution is invoked on a draft primary report, work may be stopped in accordance with the procedures set forth in Part ___ (Dispute Resolution).

I. Finalization of Reports:

The draft final primary report shall serve as the final primary report if no party invokes dispute resolution regarding the document or, if invoked, at completion of the dispute resolution process should the [DOD Component]'s position be sustained. If the [DOD Component]'s determination is not sustained in the dispute resolution process, the [DOD Component] shall prepare, within not more than 35 days, a revision of the draft final report which conforms to the results of dispute resolution. In appropriate circumstances, the time period for this revision period may be extended in accordance with Part ___ (Extensions) hereof.

J. Subsequent Modifications of Final Reports:

Following finalization of any primary report pursuant to Paragraph I above, any party to this Agreement ~~U.S. EPA or the [DOD Component]~~ may seek to modify the report, including seeking additional field work, pilot studies, computer modeling or other supporting technical work, only as provided in Paragraphs 1 and 2 below.

1. A party ~~U.S. EPA or the [DOD Component]~~ may seek to modify a report after finalization if it determines, based on new information (i.e., information that became available, or conditions that became known, after the report was finalized) that the requested modification is necessary. A party ~~U.S. EPA or the [DOD Component]~~ may seek such a modification by submitting a concise written request to the Project Manger of the other Partyies. The request shall specify the nature of the requested modification and how the request is based on new information.

2. In the event that a consensus is not reached by the Project Managers on the need for a modification, any party ~~U.S. EPA or the [DOD Component]~~ may invoke dispute resolution to determine if such modification shall be conducted. Modification of a report shall be required only upon a showing that: (1) the requested modification is based on significant new information, and (2) the requested modification could be of significant assistance in evaluating impacts on the public health or the environment, in evaluating the selection of remedial alternatives, or in protecting human health and the environment.

3. Nothing in this Subpart shall alter U.S. EPA's or [the State's] ability to request the performance of additional work, which was not contemplated by this Agreement. The [DOD Component]'s obligation to perform such work must be established by either a modification of a report or document or by amendment to this Agreement.

RESOLUTION OF DISPUTES

Except as specifically set forth elsewhere in this Agreement, if a dispute arises under this Agreement, the procedures of this Part shall apply.

All Parties to this agreement shall make reasonable efforts to informally resolve disputes at the Project Manager or immediate supervisor level. If resolution cannot be achieved informally, the procedures of this Part shall be implemented to resolve a dispute.

A. Within thirty (30) days after: (1) ~~the period established for review~~ issuance of a draft final primary document pursuant to Part ___ (Consultation with U.S. EPA and the State) of this agreement, or (2) any action which leads to or generates a dispute, the disputing Party shall submit to the other Parties a written statement of dispute setting forth the nature of the dispute, the work affected by the dispute, the disputing Party's position with respect to the dispute and the information the disputing Party is relying upon to support its position.

B. Prior to any Party's issuance of a written statement of dispute, the disputing Party shall engage the other Parties in informal dispute resolution among the Project Managers and/or their immediate supervisors. During this informal dispute resolution period the Parties shall meet as many times as are necessary to discuss and attempt resolution of the dispute.

C. The Dispute Resolution Committee (DRC) will serve as a forum for resolution of disputes for which agreement has not been reached through informal dispute resolution. The Parties shall each designate one individual and an alternate to serve on the DRC. The individuals designated to serve on the DRC shall be employed at the policy level (Senior Executive Service [SES] or equivalent) or be delegated the authority to participate on the DRC for the purposes of dispute resolution under this Agreement. The U.S. EPA's representative on the DRC is the Waste Management Division Director of U.S. EPA's Region ____. The [State] representative on the DRC is _____ _____. The [DOD Component]'s designated member is the [DOD Component] equivalent. Written notice of any delegation of authority from a Party's designated representative on the DRC shall be provided to all other Parties pursuant to the procedures of Part ____ (Notices).

D. Following elevation of a dispute to the DRC, the DRC shall have twenty-one (21) days to unanimously resolve the dispute and issue a written decision signed by all parties. If the DRC is unable to unanimously resolve the dispute within this twenty-one (21) day period the written statement of dispute shall be forwarded to the Senior Executive Committee (SEC) for resolution.

E. The SEC will serve as the forum for resolution of disputes for which agreement has not been reached by the DRC. The U.S. EPA representative on the SEC is the Regional

Administrator of the U.S. EPA's Region ___. The [State] representative on the SEC is _____. The [DOD Component]'s representative on the SEC is the [DOD Component] equivalent. The SEC members shall, as appropriate, confer, meet and exert their best efforts to resolve the dispute and issue a written decision signed by all parties. If unanimous resolution of the dispute is not reached within twenty-one (21) days, U.S. EPA's Regional Administrator shall issue written position on the dispute. The [DOD Component] or [the State] may, with twenty-one (21) days of the issuance of U.S. EPA's position, issue a written notice elevating the dispute to the Administrator of U.S. EPA for resolution in accordance with all applicable laws and procedures. In the event that a party ~~the [DOD Component]~~ elects not to elevate the dispute to the Administrator within the designated twenty-one (21) day escalation period, the party ~~[DOD Component]~~ shall be deemed to have agreed with Regional Administrator's written position with respect to the dispute.

F. Upon escalation of a dispute to the Administrator of U.S. EPA pursuant to Subpart E, the Administrator will review and resolve the dispute within twenty-one (21) days. Upon request, and prior to resolving the dispute, the parties U.S. EPA Administrator shall meet and confer with the [DOD Component's] Secretariat-Representative and [the commissioner of the state agency] to discuss the issue(s) under dispute. Upon resolution, the Administrator shall provide the other parties ~~[DOD Component]~~ with a written final decision setting forth resolution of the

dispute. The duties of the Administrator set forth in this Part shall not be delegated.

G. [The State] reserves its right to maintain an action under section 121(f)(3)(B) of CERCLA, 42 U.S.C. § 9621(f)(3)(B) to challenge the selection of a remedial action that does not attain a legally applicable or relevant and appropriate standard, requirement, criteria or limitation.

H. The pendency of any dispute under this Part shall not affect the [DOD Component]'s responsibility for timely performance of the work required by this Agreement, except that the time period for completion or work affected by such dispute shall be extended for a period of time usually not to exceed the actual time taken to resolve any good faith dispute in accordance with the procedures specified herein. All elements of the work required by this Agreement which are not affected by the dispute shall continue and be completed in accordance with the applicable schedule.

I. When dispute resolution is in progress, work affected by the dispute will immediately be discontinued if the Hazardous Waste Division Director for U.S. EPA's Region ____ requests, in writing, that work related to the dispute be stopped because, in U.S. EPA's opinion, such work is inadequate or defective, and such inadequacy or defect is likely to yield an adverse effect on human health or the environment, or is likely to have a substantial adverse effect on the remedy selection of

implementation process. The state may request the U.S. EPA's Region Division Director to order work stopped for the reasons set out above. To the extent possible, the party seeking a work stoppage ~~U.S. EPA~~ shall consult with the the other parties ~~[DOD Component]~~ prior to initiating a work stoppage request. After stoppage of work, if a party ~~the [DOD Component]~~ believes that the work stoppage is inappropriate or may have potential significant adverse impacts, the party ~~[DOD Component]~~ may meet with the party ordering a work stoppage ~~Division Director~~ to discuss the work stoppage. Following this meeting, and further consideration of the issues, the U.S. EPA Division Director will issue, in writing, a final decision with respect to the work stoppage. The final written decision of the U.S. EPA Division Director may immediately be subjected to formal dispute resolution. Such dispute may be brought directly to either the DRC or the SEC, at the discretion of the party requesting dispute resolution ~~[DOD Component]~~.

J. Within twenty-one (21) days of resolution of a dispute pursuant to the procedures specified in this Part, the [DOD Component] shall incorporate the resolution and final determination into the appropriate plan, schedule or procedures and proceed to implement this Agreement according to the amended plan, schedule or procedures.

K. Resolution of a dispute pursuant to this Part of the Agreement constitutes a final resolution of any dispute arising under this Agreement. All Parties shall abide by all terms and

conditions of any final resolution of dispute obtained pursuant to this Part of this Agreement.

ENFORCEABILITY

A. The Parties agree that:

(1) Upon the effective date of this Agreement, any standard, regulation, condition, requirement or order which has become effective under CERCLA and is incorporated into this agreement is enforceable by any person pursuant to Section 310 of CERCLA, and any violation of such standard, regulation, condition, requirement or order will be subject to civil penalties under Sections 310(c) and 109 of CERCLA; and

(2) all timetables or deadlines associated with the RI/FS shall be enforceable by any person pursuant to Section 310 of CERCLA, and any violation of such timetables or deadlines will be subject to civil penalties under Sections 310(c) and 109 of CERCLA;

(3) all terms and conditions of this Agreement which relate to interim or final remedial actions, including corresponding timetables, deadlines or schedules, and all work associated with the interim or final remedial actions, shall be enforceable by any person pursuant to Section 310(c) of CERCLA, and any violation of such terms or conditions will be subject to civil penalties under Sections 310(c) and 109 of CERCLA; and

(4) any final resolution of a dispute pursuant to Part ___ of this Agreement which establishes a term, condition, timetable, deadline or schedule shall be enforceable by any person pursuant to Section 310(c) of CERCLA, and any

violation of such term, condition, timetable, deadline or schedule will be subject to civil penalties under Sections 310(c) and 109 of CERCLA.

B. Nothing in this Agreement shall be construed as authorizing any person to seek judicial review of any action or work where review is barred by any provision of CERCLA, including Section 113(h) of CERCLA.

C. Nothing in this agreement shall be construed as a restriction or waiver of any rights the U.S. EPA or [the State] may have under CERCLA, including but not limited to any rights under sections 113 and 310, 42 U.S.C. §§ 9613 and 9659. The DOD does not waive any rights it may have under CERCLA section 120, SARA section 211 and Executive Order 12580.

D. The parties agree to exhaust their rights under Part [Dispute Resolution] prior to exercising any rights to judicial review that they may have.

E.~~C.~~ The Parties agree that all Parties shall have right to enforce the terms of this Agreement.

DEADLINES

[This model provision assumes no investigatory work is in progress at the site and no schedules have been previously established for study work. The degree of specificity and completeness of the deadlines contained herein shall be based upon information possessed at the time of development of the site-specific agreement.]

A. The following deadlines have been established, by U.S. EPA and the State, for the submittal of draft primary documents pursuant to this Agreement:

1. [Scope of Work]

B. Within twenty-one (21) days of the effective date of this Agreement, the [DOD Component] shall propose deadlines for completion of the following draft primary documents:

2. [RI/FS Work Plan, including Sampling and Analysis Plan and QAPP]

3. [Risk Assessment]

4. [Site Characterization Report]

5. [Initial Screening of Alternatives]

6. [Treatability Studies Report and, or Additional Site Characterization Report]

7. [Detailed Analysis of Alternatives]

8. [Proposed Plan]

9. [Record of Decision]

Within fifteen (15) days of receipt, U.S. EPA and the State shall review and provide comments to the [DOD Component] regarding the proposed deadlines. Within fifteen (15) days following receipt of the comments the [DOD Component] shall, as appropriate, make revisions and reissue the proposal. The parties shall meet as necessary to discuss and finalize the proposed deadlines. If the Parties agree on proposed deadlines,

the finalized deadlines shall be incorporated into the appropriate Work Plans. If the Parties fail to agree within thirty (30) days on the proposed deadlines, the matter shall immediately be submitted for dispute resolution pursuant to Part ___ (Dispute Resolution).

The final deadlines established pursuant to this Paragraph shall be published by U.S. EPA and the State.

C. Within twenty-one (21) days of issuance of the Record of Decision, the [DOD Component] shall propose deadlines for completion of the following draft primary documents:

9. [Remedial Design]

10. [Remedial Action Work Plan]

These deadlines shall be proposed, finalized and published utilizing the same procedures set forth in Paragraph B. above.

D. The deadlines set forth in this Part, or to be established as set forth in this Part, may be extended pursuant to Part ____ (Extensions) of this Agreement. The Parties recognize that one possible basis for extension of the deadlines for completion of the Remedial Investigation and Feasibility Study Reports is the identification of significant new Site conditions during the performance of the remedial investigation.

EXTENSIONS

A. Either a timetable and deadline or a schedule shall be extended upon receipt of a timely request for extension and when good cause exists for the requested extension. Any request for extension by the [DOD Component] shall be submitted in writing and shall specify:

1. The timetable and deadline or the schedule that is sought to be extended:

2. The length of the extension sought;

3. The good cause(s) for the extension; and

4. Any related timetable and deadline or schedule that would be affected if the extension were granted.

B. Good cause exists for an extension when sought in regard to:

1. An event of force majeure;

2. A delay caused by another party's failure to meet any requirement of this agreement;

3. A delay caused by the good faith invocation of dispute resolution or the initiation of judicial action;

4. A delay caused, or which is likely to be caused, by the grant of an extension in regard to another timetable and deadline or schedule; and

5. Any other event or series of events mutually agreed to by the Parties as constituting good cause.

C. Absent agreement of the Parties with respect to the existence of good cause, the [DOD Component] may seek and obtain a determination through the dispute resolution process that good cause exists.

D. Within seven days of receipt of a request for an extension of a timetable and deadline or a schedule, U.S. EPA and [the State] shall advise the [DOD Component] in writing of their respective positions on the request. Any failure by U.S. EPA or [the State] to respond within the 7-day period shall be deemed to constitute concurrence in the request for extension. If U.S. EPA or [the State] does not concur in the requested extension, it shall include in its statement of nonconcurrence an explanation of the basis for its position.

E. If there is consensus among the Parties that the requested extension is warranted, the [DOD Component] shall extend the affected timetable and deadline or schedule accordingly. If there is no consensus among the Parties as to whether all or part of the requested extension is warranted, the timetable and deadline or schedule shall not be extended except in accordance with a determination resulting from the dispute resolution process.

F. Within seven days of receipt of a statement of nonconcurrence with the requested extension, the [DOD Component] may invoke dispute resolution.

G. A timely and good faith request for an extension shall toll any assessment of stipulated penalties or application for judicial enforcement of the affected timetable and deadline or schedule until a decision is reached on whether the requested extension shall be approved. If dispute resolution is invoked

and the requested extension is denied, stipulated penalties may be assessed and may accrue from the date of the original timetable, deadline or schedule. Following the grant of an extension, an assessment of stipulated penalties or an application for judicial enforcement may be sought only to compel compliance with the timetable and deadline or schedule as most recently extended.

FUNDING

It is the expectation of the Parties to this Agreement that all obligations of the [DOD Component] arising under this Agreement will be fully funded. The [DOD Component] agrees to seek sufficient funding through the DOD budgetary process to fulfill its obligations under this Agreement.

In accordance with Section 120(e)(5)(B) of CERCLA, 42 U.S.C. § 9620(e)(5)(B), the [DOD Component] shall include in its annual report to Congress the specific cost estimates and budgetary proposals associated with the implementation of this Agreement.

Any requirement for the payment or obligation of funds, including stipulated penalties, by the [DOD Component] established by the terms of this agreement shall be subject to the availability of appropriated funds, and no provision herein shall be interpreted to require obligation or payment of funds in violation of the Anti-Deficiency Act, 31 U.S.C. § 1341. In cases where payment or obligation of funds would constitute a violation of the Anti-Deficiency Act, the dates established requiring the payment or obligation of such funds shall be appropriately adjusted.

If appropriated funds are not available to fulfill the [DOD Component]'s obligations under this Agreement, U.S. EPA and [the State] reserve the right to initiate an action against any other person, or to take any response action, which would be appropriate absent this Agreement.

Funds authorized and appropriated annually by Congress under the "Environmental Restoration, Defense" appropriation in the

Department of Defense Appropriation Act and allocated by the DASD(E) to the [DOD Component] will be the source of funds for activities required by this Agreement consistent with section 211 of SARA, 10 U.S.C. Chapter 160. However, should the Environmental Restoration, Defense appropriation be inadequate in any year to meet the total [DOD Component] CERCLA implementation requirements, the DOD shall employ and the [DOD Component] shall follow a standardized DOD prioritization process which allocates that year's appropriations in a manner which maximizes the protection of human health and the environment. A standardized DOD prioritization model shall be developed and utilized with the assistance of U.S. EPA and the states.

APPENDIX B

TYPES OF CONTRACTS

1. FIRM FIXED PRICE (DAR 3-404.2)

a. Characteristics

Calls for delivery of supplies or services at a specified firm price fixed at inception of the contract and not subject to adjustment in light of actual cost of performance.

b. Application

(1) When fair and reasonable pricing can be established at outset.
(2) Availability of reasonably definite design or performance specifications.
(3) Experienced and adequately competitive market.
(4) Purchase of "Off the Shelf" items, modified commercial items and military items for which sound prices can be developed.
(5) Where performance uncertainties can be identified and reasonably estimated as cost variants, and the contractor agrees to a firm-fixed price (FFP) at a level which entails a reasonable sharing of risk.

c. Advantages

(1) Easiest and least costly type contract to administer.
(2) Encourages contractor (Kr) efficiency and economy.
(3) Maximum risk for profit or loss borne by contractor (Kr).
(4) Allows accurate obligation of funds at outset.

d. Disadvantages

(1) No recovery by Government if market prices fall; lacks flexibility.
(2) Not appropriate if specs are indefinite.

e. Limitations

None

f. Remarks

(1) Most preferred type contract; however, usually inappropriate for R&D unless extent of work can be precisely defined.
(2) May be formally advertised or negotiated.
(3) Can be expected to produce the widest range of profits and losses.

2. FIXED PRICE INCENTIVE (DAR 3-303, 3-404.4, 3-407.2, 7-108.1, 7-108.2)

a. Characteristics

Applies profit motivation to obtain more economy and efficiency in defense procurement by offering proportionately high profit for outstanding effective and economical K performance; modest profit for mediocre performance and low profit or a loss for below average economy and efficiency in K performance.

b. Application

(1) When use of FFP is not appropriate.

(2) When incorporating incentive provision(s) into the K will not only be practical, but will likely result in a savings and more satisfactory attainment of a procurement objective.

c. Limitations

(1) Requires D&F by KO, or HPA if HPA limits the KO's authority, supporting use of incentive provision.

(2) Kr's accounting system must be adequate for price revision purposes and allow satisfactory application of price adjustment formula.

(3) Not appropriate for shifting substantially all cost responsibility to the Government.

d. Remarks

(1) Under appropriate individual contract circumstances, performance and delivery incentive provisions may be added to cost incentive. Incentive provisions must be kept in balance as concerns the needs and best interests of the Government.

(2) Objective is to obtain what is needed, when it is needed for the requirement at the lowest cost to the Government by the most practical means; is not designed to replace FFP.

(3) Billing price is established at outset as interim basis of payment pending determination of final price, or negotiating of a FFP.

This interim price is flexible within ceiling limits and subject to adjustment as appropriate upon request of Government or the Kr.

(4) Effect of delays and additional costs caused by the Government and beyond control of the contractor will normally be treated outside the incentive pattern or be subject to equitable adjustment.

3. FIRM FIXED-PRICE LEVEL OF EFFORT TERM CONTRACT: (DAR-3-404.7)

a. Characteristics

(1) Describes the scope of work in general terms, usually calling for investigation or study.

(2) Normally required submission by the contractor of reports which show the results achieved through application of required level of effort; however, payment is based on effort expended rather than on results achieved.

b. Application

(1) Particularly useful in the research and exploratory development categories when the work cannot be clearly defined and the level of effort desired can be identified and agreed upon in advance.

c. Advantages

(1) Can be used in situations in which an administratively expensive cost reimbursement contract might otherwise be necessary; e.g., CPFF.

d. Disadvantages

(1) Does not guarantee that desired results will be achieved.

e. Limitations

(1) Can be used only when the work to be performed cannot otherwise be clearly defined.

(2) Level of effort desired must be identified and agreed upon in advance of performance.

(3) There must be reasonable assurance that the result desired cannot be achieved by expenditure of less than the stipulated effort.

(4) Approval of Chief of Purchasing Office is required if the contract price exceeds $100,000.

f. Remarks

This is the latest type of contract to be added to the authorized list of types of contracts. Most useful for R&D studies under $100,000.

4. COST (DAR 3-303, 3-405.2, 7-203.3, 7-402.2)

a. Characteristics

(1) Provides for payment to Kr of allowable and allocable costs only, no fee or other consideration.
(2) Estimated cost ceiling is established for purpose of fund obligation and limitation of reimbursable cost incurrence by Kr.
(3) Normally involves estimated value of $100,000 or more.

b. Application

(1) When magnitude of performance cost uncertainties preclude use of FP contract.
(2) For R&D work with nonprofit educational institute or other nonprofit organization and for facilities contracts.
(3) When Kr wants production experience or to keep plant operating.

c. Advantages

Economical for Government if Kr is efficient and conscientious in performance.

d. Disadvantages

(1) Expensive to administer.
(2) Little, if any, incentive to Kr to reduce costs.
(3) Kr must have adequate accounting system.
(4) Requires appropriate surveillance by Government personnel during performance to assure against Kr inefficiency or waste.

e. Limitations

(1) Required D&F from HPA or (to extent authority delegated) from KO, supporting its use on the predication of economy and practicality.
(2) Ceiling amount not be exceeded by Kr without approval of KO, except at Krs own risk of nonreimbursement.
(3) Government pays only allowable and allocable costs.
(4) Audit of costs before final payment by the Government.

f. Remarks

Kr may consider surveillance by Government personnel a bother.

5. COST SHARING (DAR 3-303, 3-405.3, 7-203.3, 7-402.2(b))

a. Characteristics

Same as cost contract except Kr shares cost in lieu of full reimbursement of allowable costs.

b. Application

(1) Appropriate for R&D (with other than educational institutions and foreign countries) only when there is a high probability that the Kr will accrue substantial commercial benefits through the contract.
(2) R&D work with educational institutions or foreign governments.

c. Advantages

Mutual benefit to Kr and Government.

d. Disadvantages

Same as Cost type except there is an incentive to reduce costs.

e. Limitations

(1) Use requires approval of HPA.
(2) Required D&F as for Cost type; ceiling amount on allowable cost is established.
(3) Audit of costs before final payment.
(4) Should not be used as a factor in competitive source selection, nor as a means to obtain unfunded effort in support of programs solely of interest to DOD.
(5) KO must show conclusive evidence of anticipated commercial benefits to accrue to Kr, and must obtain prior written approval of HPA to use. (Note: These controls are N/A to jointly sponsored R&D with educational institutions or foreign countries.)

f. Remarks - None

6. COST PLUS INCENTIVE FEE (DAR 3-303, 3-405.4, 3-407.2, 3-808.1 thru 3-808.8, 7-203.4)

a. Characteristics

(1) Provides a target cost, a target fee, a minimum and maximum fee, and a fee adjustment formula, all established during initial negotiations.
(2) Upon contract completion, the formula is applied and, subject to the minimum and maximum fee limits, the fee is adjusted: an increase from target for total allowable cost under-run or a decrease from target for allowable cost over-run.
(3) Can incorporate delivery, performance and cost incentive provisions, appropriately weighted to basic procurement objective.

b. Application

(1) For development and test of major systems when operational success of development in highly probable, and
(2) When an incentive formula can be negotiated which will provide positive incentive for effective mgt and be effective over the entire range of variations that may reasonably be expected either above or below target cost.
(3) For both initial product development of major weapons and equipment where desired performance objectives are known, and in subsequent production run with potential for improvement of performance.
(4) Given level of performance is desired and confidence in achieving that performance level is reasonably good, but technical and cost uncertainties are excessive for a FPI contract.

c. Advantages

(1) Encourage economical, efficient and effective Kr performance when cost-reimbursement type K necessary.
(2) Mutual benefit potential for Government and Kr.

d. Disadvantages

(1) Costly auditing and admin burden.
(2) Kr must have adequate accounting system for timely and proper cost determination.

e. Limitations

(1) By admin regulation (DAR), maximum fee for CPIF shall not exceed statutory limits imposed for CPFF. DAR policy (ASPR Comm Case 64-3) is based on belief relaxation fee limits for CPIF would encourage use of CPIF contracts in situations where FPIF should be used.

(2) High maximum fee should be balanced by a low minimum fee which may even be a "zero" or (rarely) a "negative" fee.

(3) Use requires D&F supporting selection on a basis of economy or practicality.

f. Remarks

(1) Use weighted guideline method for profit objective.

(2) Minimum fee should be set for reasonably foreseeable variation above target cost; maximum fee at lowest reasonably foreseeable cost.

(3) Use of plateaus on share line is decreasing.

(4) Probable magnitude of cost under-run usually 10% or maybe more; of over-run-20% or more; however, when the probability for technical achievement is high, the fact that there is a high probability for a large cost variance does not dictate the use of a CPIF K rather than a FPI K.

(5) Delays and costs beyond the control of the Kr will normally be treated outside the incentive pattern or be subject to equitable adjustment.

6. ADDITIONAL INCENTIVES - PERFORMANCE: (DAR 3-407)

a. Characteristics

(1) Provides incentive to Kr to surpass performance targets by increasing or decreasing his profit in ratio to his surpassing or failing to meet performance targets.
(2) Can apply to both performance of Kr (delivery or test schedules, quality control, maintenance requirements and reliability standards); and to performance of product (range of missile, speed of aircraft, fuel economy, etc.); and to Design to Unit Product Cost criteria.

b. Application

(1) Appropriate applied to development of major weapons and equipment when desired performance objectives are known and prototype testing and evaluation is required. Also, for production runs when potential exists for desirable and improved performance.
(2) Product performance incentive should reflect a balancing of product characteristics for high overall performance of the end item.

c. Advantages

Can foster efficiency and effectiveness by Kr to mutual benefit of Kr and Government.

d. Disadvantages

May be difficult to evaluate performance and equate effect of change orders.

e. Limitations

(1) Product performance incentive should always be coupled with a balancing cost incentive.
(2) Statutory limitations on maximum fees in cost-reimbursement type contracts applies (DAR 3-405.5(c)(2)).
(3) Kr should neither be rewarded nor penalized for attainments of government-furnished components.

f. Remarks

(1) Can be incorporated in both FP-I and CP-I contracts.
(2) Test criteria must be specific as possible.
(3) Must be explicit agreement between parties as to effect on performance of changes.
(4) Government should specify, wherever possible, the minimum requirements which will be mandatory under the contract.

7. COST PLUS AWARD FEE (DAR 3-405.5)

a. Characteristics

(1) Combines characteristics of CPFF and CPIF contracts.

(2) Usual elements include: a scope of work statement, the criteria against which the Kr's performance will be evaluated, an estimated total cost, a CPFF type minimum fee and a bonus or reward-only fee.

(3) Quality of Kr's performance is usually evaluated quarterly by the Government with written reports furnished the Kr for calling attention to both meritorious work and to any deficiencies, offering opportunity for corrective action to improve subsequent evaluations.

(4) Kr's final fee is determined subjectively by the KO and Government Evaluation Board on an after-the-fact evaluation of the reports, upon completion of the contract. Final fee determination is unilateral by the KO and not subject to appeal under the "Disputes" clause of the contract.

b. Application

(1) For management of facilities, gathering and analyzing statistics, opn of computer programs, engineering svcs, etc.

(2) Level of effort contracts for performance of services where mission feasibility is established but measurement of achievement must be by subjective evaluation rather than objective measurement.

(3) Work which would have been placed under another type of K if the performance objectives could be expressed in advance by definite milestones, targets, or goals susceptible of measuring actual performance.

c. Advantages

(1) Offers more incentive for Kr efficiency and economy than CPFF where use of CPIF is not feasible.

d. Disadvantages

(1) Evaluation of performance requires much greater effort than in either CPFF or CPIF.

e. Limitations

(1) Evaluation criteria must focus on areas where Kr's skill and diligence can significantly affect outcome of work.

(2) Minimum fee shall not exceed 3% of the estimated cost exclusive of the fee. The total aggregate fee is subject to the same administrative restriction as is the maximum fee allowable for CPIF contracts.

(3) Shall not be used as an administrative technique to avoid CPFF when the criteria for CPFF contracts apply nor shall a CPAF contract be used to avoid the effort of establishing objective targets so as to make feasible the use of a CPIF contract.

(4) Shall not normally be used for procurements categorized as either Engineering Development or Operational Systems Development, which have undergone contract definition (see DAR 3-405.5(g)(iii) for exceptions).

(5) Shall not be used where the contract amount, period of performance or the benefits expected are insufficient to warrant the additional administrative effort or cost.

f. Remarks

(1) Timeliness of rendering periodic evaluation reports is critical to proper operation of this contract. In addition, maximum administrative effort should be made to provide consistent evaluation standards.

(2) Weighted guidlines method shall not be used in determining fees in the CPAF arrangement.

8. COST PLUS FIXED FEE (DAR 3-303, 3-405.6, 7-203.3, 7-203.4)

a. Characteristics

(1) Provides for negotiated estimate of costs and payment of a fixed dollar amount fee to Kr; fee adjustable only on basis of change in work or service to be performed.
(2) Kr is paid allowable and allocable costs subject to limit of estimated cost amount.
(3) Drawn in one of two basic forms: Completion or Term.

b. Application

(1) Research, preliminary exploration or studies to determine feasibility of development, and level of effort required is unknown.
(2) Development and test when use of CPIF impractical.
(3) Government owned plant, facilities.
(4) When use of any type fixed-price K is inappropriate, and parties agree that a fee is justified.
(5) Level of effort is required where high technical and cost uncertainty exists.

c. Advantages

May proceed with vague scope and indefinite specs.

d. Disadvantages

(1) Provides minimum incentive to Kr to control costs.
(2) Expensive to administer.
(3) Essentially, profit w/o risk to Kr.
(4) Kr must have adequate accounting system.
(5) Least Kr responsibility for cost.

e. Limitations

(1) Requires D&F for use; requires a final audit.

f. Remarks

(1) In order to more fully encourage and motivate defense contractors to foster and demonstrate both economy and efficiency in defense contracting, use of CPFF arrangement has been greatly curtailed within DOD.

(2) Fixed dollar amount fee is subject to statutory limitations. For experimental R&D work, the fee may not be more than 15% of the estimated cost of the contract, not incl the fee. Excluding arch and engrg design svcs, the fee for other type CPFF contracts may not be more than 10% of the estimated cost of the contract, not incl the fee.

(3) With respect to CPFF contracts for performing arch and engrg design svcs for a public work or utility, the total estimated cost (fee plus estimated cost) allowable to the Kr performing such design svcs may not be more than 6% of the Government cost estimate (not incl fees) for the project or work for which the arch or engrg design svcs are being performed.

(4) Not normally authorized for engineering development or operational systems development except as an authorized deviation from DAR.

(2) Completion form normally required Kr to complete and deliver specified end product as condition for payment of entire fixed dollar amount fee and within the original estimated cost if possible. Government may increase cost estimate and direct Kr to incur costs above original cost estimate without increasing fee.

(3) Term form obligates Kr to satisfactorily devote specified level of effort for specified period of time to obtain full fee. Renewals for further periods of performance are considered new procurements involving new fee and cost arrangements.

9 TIME AND MATERIALS (DAR 3-406.1, 3-406.2, Section 7, Part 9)

a. Characteristics

(1) Provides for payment of: direct labor hours at specified fixed hourly rates (including direct and indirect labor, overhead, general and administrative, and profit), and material at cost.
(2) As a variant, may entail only Labor-Hours when either no material is involved, or material is not supplied by Kr. Other features of Time and Material contract apply.
(3) Requires a price ceiling which Kr may not exceed except at own risk. KO must document contract file and substantiate any change to price ceiling and to the extent of such change.

b. Application

(1) When nature of work is known in advance, but not the extent, or duration of the work.
(2) When it is not possible at outset to anticipate costs with any degree of confidence.
(3) Procurement of engineering and design svcs; manufacture of production and special machine tools; repair, maintenance or overhaul work; emergency situation work.

c. Advantages

Can fulfill a special situation need that no other type contract can suitably serve.

d. Disadvantages

(1) Requires appropriate surveillance by Government during performance to preclude inefficiency or waste by Kr.
(2) Danger of Kr running up time to increase profit.
(3) Expensive to administer.
(4) Kr must have adequate accounting system.
(5) No positive profit incentive to Kr to control costs or to manage labor force efficiently.

e. Limitations

Requires D&F by KO that no other type contract will suitably serve.

f. Remarks

Rarely used for R&D efforts; however, sometimes used for engineering support services.

10 INDEFINITE DELIVERY - DEFINITE QUANTITY CONTRACT (DAR 3-409.1, 3-409.4, 7-1102.1)

a. Characteristics

Provides for delivery of definite overall quantity of supplies or services to designated locations, within specified period, upon issuance of orders. May be used in conjunction with a pricing arrangement to effect a Task Order Contract.

b. Application

(1) When quantity of recurring need services are known in advance.
(2) Services are readily available or require only short lead time.

c. Advantages

Save administrative time and expense of repeated negotiations and awards.

d. Disadvantages

Expensive to administer.

e. Limitations - None

f. Remarks

(1) Funds obligated for total contract amount on award of contract.
(2) When used for Task Order Contract pricing arrangement is usually CPFF Term or T&M/Labor Hour, but may also be fixed price.

11 INDEFINITE DELIVERY - REQUIREMENTS CONTRACT (DAR 3-409.2, 3-409.4, 7-1102.2)

a. Characteristics

(1) Provides for purchase of actual needs of specific supplies or svcs of designated activities during a specific period.
(2) States estimated total qty need; maximum limit of Kr's obligation to deliver and appropriate provision limiting the Government's obligation to order, when feasible.
(3) Deliveries scheduled by delivery orders from activities and contract may specify maximum and minimum qtys per individual order.
(4) Funds are obligated by each delivery order and not by the contract itself.

b. Application

(1) When precise qty needs of designated activities during a definite period not known initially.
(2) Generally, for commercial or modified commercial items of recurring need nature.

c. Advantages

(1) Subject to minimum total qty's limitation, order only when and to extent need arises.
(2) Flexible regarding qty and delivery scheduling.
(3) Price savings may be realized by combining several requirements into one qty procurement.

d. Disadvantages

Government generally obligated to place all requirements fitting SOW with the contractor. Expensive to administer.

e. Limitations - None

f. Remarks

(1) Funds obligated on issue of Delivery Orders and, where applicable, on stated minimum total qty.
(2) When used for Task Order contract, pricing arrangement is usually CPFF Term or T&M/Labor Hour, but may also be fixed price.

12 INDEFINITE DELIVERY - INDEFINITE QUANTITY CONTRACT (DAR 3-409.3, 3-409.4, 7-1102.3)

a. Characteristics

(1) Provides for purchase of indefinite qty, within stated limits, of supplies or svcs by designated activities during a definite period.
(2) Deliveries scheduled by placment of orders on Kr.
(3) Contract may specify maximum and minimum quantities allowable per individual order.
(4) Funds for other than the states minimum qty are obligated by each order; not by the contract itself.

b. Application

(1) When actual quantity needs of specific activities for specific period cannot be established in advance beyond a reasonable minimum qty.
(2) Generally for commercial or modified commercial items of recurring need nature.

c. Advantages

Same as Requirements.

d. Disadvantages

Government obligated to order minimum quantity upon award. Expensive to administer.

e. Limitations - None.

f. Remarks

Same as for Requirements contract.

APPENDIX C

Appropriate Actions and Methods of Remedying Releases

(a) This Appendix D to 40 CFR Part 300 describes types of remedial actions generally appropriate for specific situations commonly found at remedial sites and lists methods for remedying releases that may be considered by the lead agency to accomplish a particular response action. This list shall not be considered inclusive of all possible methods of remedying releases and does not limit the lead agency from selecting any other actions deemed necessary in response to any situation.

(b) In response to contaminated soil, sediment, or waste, the following types of response actions shall generally be considered: removal, treatment, or containment of the soil, sediment, or waste to reduce or eliminate the potential for hazardous substances or pollutants or contaminants to contaminate other media (ground water, surface water, or air) and to reduce or eliminate the potential for such substances to be inhaled, absorbed, or ingested.

(1) Techniques for removing contaminated soil, sediment, or waste include the following:

(i) Excavation

(ii) Hydraulic dredging

(iii) Mechanical dredging

(2) Techniques for treating contaminated soil, sediment, or waste include the following:

(i) Biological methods, including the following:

(A) Treatment via modified conventional wastewater treatment techniques.

(B) Anaerobic, aerated, and facultative lagoons.

(C) Support growth biological reactors.

(D) Microbial biodegradation.

(ii) Chemical methods, including the following:

(A) Chlorination.

(B) Precipitation, flocculation, sedimentation.

(C) Neutralization.

(D) Equalization.

(E) Chemical oxidation.

(iii) Physical methods, including the following:

(A) Air stripping

(B) Carbon adsorption

(C) Ion exchange

(D) Reverse osmosis
(E) Permeable bed treatment

(F) Wet air oxidation

(G) Solidification

(H) Encapsulation

(I) Soil washing or flushing

(J) Incineration

(c) In response to contaminated ground water, the following types of response actions will generally be considered: elimination or containment of the contamination to prevent further contamination, treatment and/or removal of such ground water to reduce or eliminate potential exposure to such contamination, and/or restrictions on use of the ground water to eliminate potential exposure to the contamination.

(1) Techniques that can be used to contain or restore contaminated ground water include the following:

(i) Impermeable barriers, including the following:

(A) Slurry walls

(B) Grout curtains

(C) Sheet pilings

(ii) Permeable treatment beds

(iii) Ground water pumping, including the following:

(A) Water table adjustment

(B) Plume containment

(iv) Leachate control, including the following:

(A) Subsurface drains

(G) Drainage ditches

(C) Liners

(2) Techniques suitable for the control of contamination of water and sewer lines include the following:

(i) Grouting

(ii) Pipe relining and sleeving

(iii) Sewer relocation

(d)(1) In response to contaminated surface water, the following types of response actions shall generally be considered: elimination or containment of the contamination to prevent further pollution, and/or treatment of the contaminated water to reduce or eliminate its hazard potential.

(2) Techniques that can be used to control or remediate surface water include the following:

(i) Surface seals

(ii) Surface water diversions and collection systems, including the following:

(A) Dikes and berms

(B) Ditches, diversions, waterways.

(C) Chutes and downpipes.

(D) Levees

(E) Seepage basins and ditches

(F) Sedimentation basins and ditches

(G) Terraces and benches

(iii) Grading

(iv) Revegetation

(e) In response to air emissions the following techniques will be considered:

(1) Pipe vents

(2) Trench vents

(3) Gas barriers

(4) Gas collection

(5) Overpacking

(6) Treatment for gaseous emissions, including the following:

(i) Vapor phase adsorption

(ii) Thermal oxidation

(f) Alternative water supplies can be provided in several ways, including the following:

(i) Individual treatment units

(ii) Water distribution system

(iii) New wells in a new location or deeper

(iv) Cisterns

(v) Bottled or treated water

(vi) Upgraded treatment for existing distribution systems

(g) Temporary or permanent relocation of residents, businesses, and community facilities may be provided where it is determined necessary to protect human health and the environment.

DEPARTMENT OF THE ARMY
ASSISTANT CHIEF OF STAFF FOR INSTALLATION MANAGEMENT
600 ARMY PENTAGON
WASHINGTON DC 20310-0600

REPLY TO
ATTENTION OF

S: 1 Feb 94

DAIM-ED-R (200-1c)

14 DEC 1993

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Active Sites Installation Restoration Program (IRP) - FY 94 Guidance for Required Installation Action Plans (IAPs)

1. References:

a. Memorandum, USAEC, ENAEC-IR-P, 19 Mar 93, subject: Required Active Sites Installation Restoration Program (IRP) Action Plans.

b. Memorandum, ACSIM, DAIM-ED-R, 10 Sep 93, subject: Installation Restoration Program (IRP) Management Plan.

2. The key document for overall management of the Installation Restoration Program (IRP) is the Installation Action Plan (IAP). Installations are responsible for preparing and updating IAPs annually and crosswalking all identified environmental requirements into RCS-1383 Report submittals.

3. Reference 1a established the requirement for all installations with a regulatory driven IRP to prepare initial IAPs. Essentially all of these initial IAPs were submitted to the U.S. Army Environmental Center (USAEC) by the 31 July 93 suspense date. Reference 1a and 1b further established that updates are required every February beginning in 1994 and initial submittals for some additional installations also by February 1994.

4. The enclosure provides specific guidance for preparing and submitting new and updated IAPs to USAEC no later than 1 Feb 94.

5. Request major Army commands task identified installations to update and/or prepare initial IAPs and ensure that each of these installations receive a copy of this guidance to facilitate execution of this work. A list of installations currently requiring IAPs is provided at the enclosure.

DAIM-ED-R (200-1c) 14 DEC 1993
SUBJECT: Active Sites Installation Restoration Program (IRP) - FY 94 Guidance for Required Installation Action Plans (IAPs)

6. Assistance and additional information are available from the Program Management Branch, Installation Restoration Division of the USAEC. Points of contact at USAEC for assistance are Dr. Kathleen Buchi, DSN 584-1541; Mr. Joseph King, DSN 584-1535; and Ms. Karen Wilson, DSN 584-1542, or commercial (410) 671-3182.

Encl

JOHN H. LITTLE
Major General, GS
Assistant Chief of Staff
for Installation Management

DISTRIBUTION:
HQDA(SAILE)
HQDA(DAAR-ZA)

CHIEF OF STAFF,
FORCES COMMAND, ATTN: FCCS, BLDG 200, FORT MCPHERSON, GA 30330-6000
MILITARY TRAFFIC MANAGEMENT COMMAND, 5611 COLUMBIA PIKE, FALLS CHURCH, VA 22041-5050
U.S. ARMY, PACIFIC, ATTN: APEN-IV, BLDG. T-101, FORT SHAFTER, HI 96858-5100
U.S. ARMY CORPS OF ENGINEERS, ATTN: CELD-ZE, 20 MASSACHUSETTS AVENUE, NW., WASH DC 20314-1000
U.S. ARMY HEALTH SERVICES COMMAND, ATTN: HSCS, FORT SAM HOUSTON, TX 78234-6000
U.S. ARMY INFORMATION SYSTEMS COMMAND, ATTN: ASCS FORT HUACHUCA, AZ 85613-5000
U.S. ARMY INTELLIGENCE AND SECURITY COMMAND, FORT BELVOIR, ATTN: IACS, FORT BELVOIR, VA 22060-5370
U.S ARMY MATERIEL COMMAND, ATTN: AMCCS, 5001 EISENHOWER AVENUE, ALEXANDRIA, VA 22333-0001
U.S ARMY MILITARY DISTRICT OF WASHINGTON, ATTN: ANCS, BLDG. 42, FORT MCNAIR, ARLINGTON, VA 20319-5050
U.S. ARMY TRAINING AND DOCTRINE COMMAND, ATTN: ATCS, BLDG. 10, FORT MONROE, VA 23651-5000

DEPUTY COMMANDER, U.S. ARMY SPACE AND STRATEGIC COMMAND, ATTN: CSSD-ZC, P.O. BOX 1500, HUNTSVILLE, AL 35807-3801

MANAGER, ENVIRONMENTAL RESOURCES MANAGEMENT OFFICE, (IRP/NGB), ATTN: NGB-ZA, BLDG. E4430, ABERDEEN PROVING GROUND, MD 21010-5401

DAIM-ED-R (200-1c) 14 DEC 1993
SUBJECT: Active Sites Installation Restoration Program (IRP) - FY 94 Guidance for Required Installation Action Plans (IAPs)

PROGRAM MANAGER FOR ROCKY MOUNTAIN ARSENAL, ATTN: AMXRM-PM
17 STREET, BLDG. 111, COMMERCE CITY, CO 80022-2180

SUPERINTENDENT,
U.S. MILITARY ACADEMY, ATTN: MACS, BLDG. 667A, WEST POINT, NY 10996-1592

CF:
COMMANDER,
U.S. ARMY ARMAMENT, MUNITIONS, AND CHEMICAL COMMAND, ATTN: AMSMC-ISE, BLDG. 108, ROCK ISLAND, IL 61299-6000
U.S. ARMY DEPOT SYSTEM COMMAND, ATTN: AMSDS-IN-E BLDG. 10, CHAMBERSBURG, PA 17201-4170
U.S. ARMY TEST AND EVALUATION COMMAND, ATTN: AMSTE-EQ BLDG. 314, ABERDEEN PROVING GROUND, MD 21005-5055
U.S. ARMY AVIATION AND TROOP COMMAND, ATTN: SATAI-A ST. LOUIS, MO 63120-1798
U.S. ARMY COMMUNICATIONS AND ELECTRONICS COMMAND, ATTN: AMSEL-SF-REE, FORT MONMOUTH, NJ 07703-5109
U.S. ARMY MISSILE COMMAND, ATTN: AMSMI-EQ, REDSTONE ARSENAL, AL 35898-5340
U.S. ARMY TANK AND AUTOMOTIVE COMMAND, ATTN: AMSTA-XE, WARREN, MI 48397-5000

DIRECTOR,
U.S. ARMY RESEARCH LABORATORY, ATTN: AMSRL-OP-RK-E, ADELPHI, MD 20783-1145

FY94 ACTIVE SITES

INSTALLATION RESTORATION PROGRAM

ACTION PLAN GUIDANCE

FY94 ACTIVE SITES

INSTALLATION RESTORATION PROGRAM

ACTION PLAN GUIDANCE

PURPOSE.

Provide guidance and procedure for preparation of action plans which outline the total multi-year restoration program for an installation. The plans define all Installation Restoration Program (IRP) requirements, propose a comprehensive approach to conduct investigations and remedial actions and identify any possible removals and interim remedial actions at an installation.

The intended audience for this guidance is major Army commands (MACOMs), Installation Environmental Coordinators and their IRP executing agency Project Managers.

RECOMMENDED USE OF THE ACTION PLAN.

Installation Action Plans (IAPs) are used by the Program Management Branch of U.S. Army Environmental Center (USAEC) and MACOMs to monitor requirements and schedules and make decisions concerning tentative budgets for all major Army restoration programs.

The IAP is more than a simple listing of individual projects and their associated schedules and funding requirements. The IAP is an integrated, coordinated approach to achieving the installation's environmental restoration goals. Installations and program executors use the IAP as a comprehensive planning tool to tell a clear story of where the installation is planning to go, how it intends to get there and why the journey is necessary in the first place.

The fundamental goal of the Defense Environmental Restoration Program (DERP) is to restore sites at Department of Defense (DOD) installations, therefore the most important use of the IAP is to identify targets of opportunity for removal and interim remedial actions. Identified removals and interim actions in the IAP receive a priority code assignment of "K" in the IRP Work Plan, ensuring funding availability for the action.

BACKGROUND.

In an effort to coordinate planning information between the Program Manager for Installation Restoration (the USAEC), MACOMs, installations and program executors, an IAP program was developed to be an integral part of project management for the IRP.

Guidance (continued)

In 1992, the Deputy Assistant Secretary of the Army for the Environment, Safety and Occupational Health (DASA(ESOH)) identified that the Army needed to place increased emphasis on the identification, programming and execution of response actions that can be considered remedial actions. A format, outline and guidance for an IAP program incorporating this need were developed and distributed to select installations. As a result, 42 IAPs were prepared and submitted to the USAEC in July 1992.

In 1993, all installations with IRP requirements were required to submit IAPs. 76 IAPs were submitted. IAPs are now a required basic tool for the successful management of the IRP at Army installations.

INSTALLATIONS REQUIRED TO PREPARE AN IAP.

IAPs must be developed for all Army installations with requirements identified in the Army IRP Work Plan, including installations on the National Priorities List, installations with off-post or suspected off-post contamination, installations with sites considered a threat to human health, installations with corrective actions required under the Resource Conservation and Recovery Act (RCRA) Part B Permit and other State regulatory requirements.

If an installation's only requirements in the Army's IRP Work Plan are Underground Storage Tank (UST) removals with a priority code assignment of "i" (UST removals) or Federal Agency Hazardous Waste Compliance Docket requirements with a priority code assignment of "G", an IAP need not be prepared.

Attachment 1 lists all installations required to submit an IAP based on the FY94 Army IRP Work Plan (7 Dec 93).

PREPARATION OF THE IAP.

The installation is responsible for preparation of the IAP. The installation may prepare the IAP or contact their executing agency/executor to prepare the IAP. In either case, the IAP should be prepared as a coordinated effort between the installation and the executor. If an installation does not have the time or resources to prepare the IAP, the installation is encouraged to contact their executor. As the IAPs are a required part of the Army IRP project management documentation, if the installation requests the executor to prepare the IAP, the executing agency Project Manager should complete this task.

If an installation meets the criteria for preparation of an IAP, but none of its project requirements are in the funded zone of the IRP Work Plan and there is no executor, the installation should contact the Program Management Branch, Installation Restoration Division of USAEC for assistance.

Guidance (Continued)

IAP CONTENT.

IAPs include a short chronological installation history of contamination studies, all Restoration Management Information System (RMIS) sites, contaminants of concern, response actions taken, past milestones and realistic goals and schedules based on known and expected IRP projects. Major issues that may affect the scope and schedule for the overall program are identified. Prior year funding and tentative cost estimates through the entire remedial process including Report Control System (RCS) 1383 report numbers are detailed. The tentative cost estimates reflect a reasonable total cost to complete the IRP (through completion of all remedial actions) for an installation. This is critical information used in planning, programming and budgeting the IRP for the entire Army. The IAPs also identify and emphasize any possible or future response actions.

IAP FORMAT.

The required format for the IAP is detailed in attachment 2. Attachment 3 is an outline that can be used as a guide to ensure that all necessary information is included in the plan. Review attachment 4 for an example of a completed IAP.

BASIC REQUIREMENTS

a. Removals/Interim Remedial/Remedial Action

A required component of the IAP is the assessment of removals/interim remedial/remedial actions for an installation. This assessment includes the identification of remedial action (RA) schedules; the identification of possible removals and interim remedial actions that can be initiated without an extensive study phase; a more accurate accounting and reporting of past RAs; the identification, programming and execution of response actions that can be considered RAs; and the identification of innovative means to speed up the study process to allow more timely RAs.

Identified removals and interim actions in the IAP receive a priority code assignment of "K" in the IRP Work Plan, ensuring funding availability for the action.

It is highly recommended that the installation along with any necessary personnel from the MACOM, the U. S. Army Environmental Hygiene Agency (USAEHA), and the IRP executor for an installation visit every RMIS site to assess the potential for removal actions/interim response actions in the development of the IAP.

Guidance (continued)

b. RCS 1383 Report Number Identifications

Installations request funding for restoration projects from the Defense Environmental Restoration Account (DERA) by submittal of RCS 1383 reports for inclusion in the Army's IRP Work Plan. RCS 1383 reports identify investigations and remedial actions necessary to eliminate contamination at an installation. Each restoration project must have an associated RCS 1383 report to receive funding. Each site with an associated action under the IRP will be required to note the RCS 1383 report number in the IAP.

If the executing agency is preparing the IAP and is not familiar with the RCS 1383 report numbers for restoration projects, those numbers should be provided by the installation to the executing agency as soon as possible.

c. Restoration Management Information System (RMIS)

Sites addressed in the IAP will include all sites listed in the RMIS, including sites with no further response action planned. If the executing agency is not familiar with the RMIS sites for an installation, RMIS information should be provided by the installation to the executing agency as soon as possible. If RMIS information is needed by the installation, please contact the Program Management Branch in writing or by fax:

Commander,
U.S. Army Environmental Center
ATTN: SFIM-AEC-IRP (Mr. Harry Dutcher)
Aberdeen Proving Ground, MD 21010-5401

Fax: (410) 671-1548
DSN 584-1548

d. Funding Information

IAPs require inclusion of prior, current and future year DERA funds requirements presented as the total IRP budget from inception of the program at the preliminary assessment phase to projected completion of all remedial actions. Often, installations have no record of total prior year DERA funds distribution. The installation may request this information from the Resource Management Division of USAEC in writing or by fax:

Commander,
U.S. Army Environmental Center
ATTN: SFIM-AEC-RMB
Aberdeen Proving Ground, MD 21010-5401

FAX: (410) 671-2008
DSN 584-2008

Guidance (continued)

Current and future year funding estimates must match the RCS 1383 report requirements. Emphasis should be placed on identifying all outyear requirements through completion of all remedial actions. Outyear cost estimates should reflect a reasonable total cost to complete the IRP for an installation. This is critical information used in planning, programming and budgeting the IRP for the entire Army.

e. Signatures

Once the IAP is acceptable to the installation, the Installation Commander, Garrison Commander or a formally designated subordinate authority will sign the IAP indicating approval. If the IAP is signed by someone other than the Installation or Garrison Commander, a letter delegating signature authority from the Installation or Garrison Commander should be included when the IAP is submitted.

The chief of the environmental office at the MACOM will also sign the IAP indicating concurrence.

CHANGES TO IAP REQUIREMENTS.

1. IAPs are to be updated and submitted in February of each fiscal year to allow for inclusion of Fall RCS 1383 report requirements and schedules for funded projects in the second, third and fourth quarters. A February due date will also allow inclusion of final prior year funds totals.

2. IAP summaries are now required. See format, outline and example. All IAP summaries will be compiled and distributed, therefore, please do not vary from the format provided.

3. In an effort to comply with future DOD requirements and allow for more widespread distribution of IAPs, the cost estimate section (previously section 6) must be moved to the end of the document as an attachment. Then, if installations wish to distribute the IAPs outside the Army, sensitive budgeting information can easily be removed.

4. Defense Priority Model (DPM) scores are not required for the FY94 IAP.

5. Projected Record of Decision/Decision Document dates are now required under Section 5.

6. USAEC now requires 3 copies of each IAP. The original IAP and one copy will be kept on file at the USAEC Program Management Branch and one copy will be forwarded by the Program Management Branch to the USAEC Resource Management Division.

Guidance (continued)

SUBMITTAL

The installation will be responsible for submitting the completed and signed plan to their MACOM. The MACOM will submit the orginal and two copies of all IAPs to USAEC, Installation Restoration Division, Program Management Branch by **1 Feb 94**. All plans will be updated and submitted annually by February 1.

MACOMs should mail all IAPs to:

Commander,
U.S. Army Environmental Center
ATTN: SFIM-AEC-IRP
Aberdeen Proving Ground, MD 21010-5401

FAX: (410) 671-1548
DSN 584-1548

POINTS OF CONTACT

Points of contact at USAEC are Dr. Kathleen Buchi, DSN 584-1541 or commercial (410)671-1541, Mr. Joseph King, DSN 584-1535 or commercial (410) 671-1535 and Ms. Karen Wilson, DSN 584-1542 or commercial (410)671-1542/2270.

ATTACHMENT 1

Installations Required To Prepare IAPs in FY94

INSTALLATIONS REQUIRED TO PREPARE AN IAP IN FY94

U.S. ARMY MATERIEL COMMAND

Shaded installations indicate first time IAP preparation required.

AMMCOM
Badger AAP
Cornhusker AAP
Hawthorne AAP
Holston AAP
(Phosphate Dev Wks)
Indiana AAP
Iowa AAP
Joliet AAP
Kansas AAP
Lake City AAP
Lone Star AAP
Longhorn AAP
Louisiana AAP
McAlester AAP
Milan AAP
Newport AAP
Radford AAP
Ravenna AAP
Riverbank AAP
Sunflower AAP
Twin Cities AAP
Volunteer AAP

ARDEC (Picatinny Arsenal)
Pine Bluff Arsenal
Rock Island Arsenal
Watervliet Arsenal

DESCOM
Anniston Army Depot
Blue Grass Army Depot
Letterkenny Army Depot
Red River Army Depot
Savanna Army Depot
Seneca Army Depot
Sierra Army Depot
Tobyhanna Army Depot
Tooele Army Depot

TECOM
Aberdeen Proving Ground
White Sands Missle Range
Dugway Proving Ground

ATCOM
Natick Res Dev & Eng Center

MICOM
Redstone Arsenal

RMA
Rocky Mountain Arsenal

FORCES COMMAND

Fort Bragg
Fort Campbell
Fort Carson
Fort Devens (Hingham Annex)
Fort Devens (Sudbury Annex)
Fort Dix
Fort Drum
Fort Gillem
Fort Hunter Liggett
Fort Irwin
Fort Lewis
Fort McCoy
Fort McPherson
Fort Polk
Fort Riley
Fort Sam Houston
Fort Stewart
Hunter Army Airfield
Presidio of Monterey

Shaded installations indicate first time IAP preparation required.

TRAINING AND DOCTRINE COMMAND

Fort Benning
Fort Bliss
Fort Chaffee
Fort Eustis
Fort Gordon
Fort Huachuca
Fort Jackson
Fort Knox
Fort Leavenworth
Fort Lee
Fort Leonard Wood
Fort McClellan
Fort Rucker
Fort Sill
Fort Story

Shaded installations indicate first time IAP preparation required.

U.S. ARMY, PACIFIC COMMAND

ALASKA

Fort Greely
Fort Richardson
Fort Wainwright

HAWAII

Fort Shafter
Kilauea Military Reservation
Pohakuloa Training Area
Schofield Barracks Military Reservation
Tripler Army Medical Center

HEALTH SERVICES COMMAND

Fort Detrick

STRATEGIC DEFENSE COMMAND

Stanley R Mickelson Safegaurd Complex

U.S. ARMY CORPS OF ENGINEERS

Cold Regions Research Engineering Laboratory

MILITARY TRAFFIC MANAGEMENT COMMAND

Military Ocean TML Oakland
Military Ocean TML Sunny Point

U.S. ARMY MILITARY DISTRICT OF WASHINGTON

Fort Meade

U.S. ARMY NATIONAL GUARD BUREAU

Camp Edwards
Camp Navajo (Bellemont Training Site)

U.S. MILTARY ACADEMY

West Point Military Academy

Shaded installations indicate first time IAP preparation required.

ATTACHMENT 2

Format

INSTALLATION ACTION PLAN FORMAT

SUMMARY [Not to Exceed (NTE) 1 page]
- Status
- Total Number of RMIS Sites
- Different Site Types
- Most Widespread Contaminants of Concern
- Media of Concern
- Completed REM/IRA/RA
- Current IRP Phase
- Projected IRP Phase
- Identified Possible REM/IRA/RA
- Funding
- Duration

1. **INSTALLATION INFORMATION [NTE 1 page]**

(bulleted style to include)
-Installation Locale
-Command Organization
-Lead Executing IRP Agency
-Regulator Participation
-Regulatory Status
-Significant Changes to IRP from Previous Year

2. **INSTALLATION DESCRIPTION [NTE 2 pages]**
-Current Activity Status
-Historic Activity Information
-Regulatory Status

3. **CONTAMINATION ASSESSMENT**
-Studies to date
-RMIS site descriptions to include
--identification by RMIS number and name
--site type (cluster by site type when practical)
--contaminants of concern
--media of concern
--completed, current and future IRP phase
--completed, current or future REM/IRA/RA
--associated RCS 1383 report numbers

4. **IRP SITE SUMMARY CHART**
- RMIS number
- Contaminants of concern
- Completed, current and future IRP phase
- REMs/IRAs/RAs to date
- Any possible REM/IRA/RA

5. **SCHEDULE [NTE 3 pages]**
- Start date of IRP at installation
- Past phase completion milestones
- Projected phase completion milestones
- Projected ROD/DD dates
- IAG/FFA driven milestones (if applicable)
- Chart (inception to completion)

6. **REMOVAL/INTERIM REMEDIAL/REMEDIAL ACTION ASSESSMENT**
- Sites/clusters that have been assessed
- Past REM/IRA/RA/LTM per site/clusters (include costs)
- Future REM/IRA/RA/LTM opportunities
- Innovative means to expedite study process to RA phase

7. **CONCURRENCE**
- Signature of Installation Commander
- Signature of MACOM

ATTACHMENT COST ESTIMATES [NTE 3 pages]
- By phase (include prior, current & future years)
- By fiscal year (include prior, current & future years)
- Include RCS 1383 report numbers
- Chart (total from inception to completion)

ATTACHMENT 3

Outline

INSTALLATION ACTION PLAN OUTLINE

SUMMARY **Not to Exceed (NTE) 1 page**

1. Status
   List status
   -- i.e. Non-NPL with RCRA Part B Permit or
   NPL Installation and list the HRS/HRS2 Score.
2. Total Number of RMIS Sites
   -- i.e. 36.
3. Different Site Types
   List most significant site types
   -- i.e. 12 Landfills, 2 Lagoons, 6 Disposal Pits
4. Most Widespread Contaminants of Concern
   -- i.e. Explosives, Petroleum/Oil/Lubricants
5. Media of Concern
   -- i.e. Groundwater, soil
6. Completed REM/IRA/RA
   List Action, Year, Total Cost
   -- i.e. Soil Incineration (1988) Total Cost $9,209,000
   Waterline Extension (1986) Total Cost $5,269,000
7. Current IRP Phase
   -- i.e. SI at 6 sites
   RI at 12 sites
   RI/FS at 1 site
   FS at 1 sites
8. Projected IRP Phase
   -- i.e. NFA at 6 sites
   RI/FS at 6 sites
   FS at 1 site
   RD/RA/LTM at 2 sites
9. Identified Possible REM/IRA/RA
   -- i.e. Extension and expansion of GW Pump and Treat
   Soil Incineration at 2 sites
10. Funding
    List total prior year funds, total current year funds, and total future requirements, then total.
11. Duration
    Year of IRP Inception
    Year of IRP Completion (excluding LTMing)

1. **INSTALLATION INFORMATION** **NTE 1 page**
   A. Installation Locale
      1. City, County and State
         a. approximate situation to high population densities
      2. Size (in acres)
   B. Command Organization
      1. Major Command and Subcommand (if applicable)
         a. identification of organization within commands responsible for IRP

Outline (continued)

2. Installation
   a. identification of organization within installation responsible for IRP
3. Lead Executing IRP Agency
   a. Investigation Phase Executing Agency
   b. Remedial Action Phase Executing Agency

C. Regulator Participation
1. Federal
   a. identification of regulating EPA region & branch
2. State
   a. identification of regulating State agency

D. Regulatory Status
1. NPL installation/site with or without IAG
2. Non-NPL with RCRA Corrective Action
3. Non-NPL without RCRA Corrective Action under State regulatory requirements
4. Technical Review Committee
5. Notice of Violation or Consent Order, etc...

E. Significant Changes to IRP from Previous Year (if any)
1. Placed on the NPL
2. Proposed to the NPL
3. New RCRA corrective actions
4. Issuance of an NOV or a consent order
5. Confirmed or suspected off-post contamination
6. Regulatory approval of a phase, etc...

2. **INSTALLATION DESCRIPTION** **NTE 2 pages**

A. Current
1. Active/Inactive
2. Scheduled for Closure

B. Historic
1. When Opened
2. Purpose of Installation
   a. ammunition production
   b. training
   c. information systems, etc...
3. Periods of Inactivity
4. Major Tenant Operations
   a. history
   b. type of operation

C. Regulatory Status
1. Lead Regulator
   a. USEPA
   b. State
   c. multiple
2. Regulatory Driver
   a. NPL with IAG/FFA
      --include site versus installation if applicable
   b. NPL without approved IAG

Outline (continued)

c. Non-NPL with Corrective Action from Part B Permit
d. Non-NPL with Notice of Violation, etc...

3. **CONTAMINATION ASSESSMENT**
   A. Assessment Overview (summary of major environmental restoration studies)
      1. Include table of all studies completed
      2. Include map if possible
      3. Total number of RMIS sites at an installation
   B. Site Descriptions (by operable unit when applicable)
      1. Identification by RMIS Number and Name
      2. General Location within Installation
      3. Site type (use RMIS as guideline)
         a. past operational discharge
         b. landfill
         c. spill, etc...
      4. Contaminants of Concern (use RMIS as guideline)
         a. identification of contaminants
         b. period of contamination
      5. Media of Concern
         a. soil
         b. surface water
         c. ground water
         d. air
         e. multiple
      6. Completed IRP Phase
         a. preliminary assessment/site inspection
         b. site investigation
         c. remedial investigation/feasibility study
         d. removal action (REM) (include actual cost)
         e. interim remedial action (IRA) (include actual cost)
         f. remedial action (RA) (include actual cost)
         g. long-term monitoring (LTM) (include actual cost)
      7. Current IRP Phase
         a. current phase (include RCS 1383 report number)
         b. no further response action planned
      8. Future IRP Phase
         a. no further response action planned
         b. next phase expected (include RCS 1383 report number)
         c. anticipated REM/IRA/RA/LTM (include RCS 1383 report number)

Outline (continued)

4. **IRP SITE SUMMARY CHART**
   - A. RMIS number
   - B. Contaminants of concern
   - C. Completed IRP phase
   - D. Current Phase of IRP
   - E. REMs/IRAs/RAs to date
   - F. Future IRP Phase and Any Possible Recommended REM/IRA/RA/LTM

5. **SCHEDULES** **NTE 3 pages**
   - A. Start Date of IRP at Installation
   - B. Past Phase Completion Milestones
   - C. Projected Phase Completion Milestones
   - D. IAG/FFA Driven Milestones
   - E. Projected ROD/DD approval dates
   - F. Estimated Completion Date of IRP at Installation
   - G. Chart (include IRP inception to completion by phase)

6. **REMOVAL/INTERIM REMEDIAL/REMEDIAL ACTION ASSESSMENT**
   - A. Total Sites Assessed Per Site/Clusters
   - B. Past REM/IRA/RA/LTM Per Site/Clusters (include actual cost)
   - C. Future REM/IRA/RA/LTM Opportunities
   - D. Innovative Means to Expedite Study Process to RA Phase

7. **CONCURRENCE**
   - A. Approval
     1. Signature of the Installation Commander, Garrison Commander, or officially authorized signature authority with appropriate signature block
   - B. Concurrence
     1. Signature of the chief of the environmental office at the major Army command with appropriate signature block

ATTACHMENT.

COST ESTIMATES **NTE 3 pages**

- A. By Phase (include prior, current and future years)
- B. By Fiscal Year (include prior, current and future years)
  1. Include RCS 1383 report number for current and future years
- C. Total Cost (from inception of IRP to completion of all remedial actions)
- D. Chart (include total costs from inception to completion by phase)
- E. Other than DERA-OMA funding requirements

ATTACHMENT 4

Example

EXAMPLE IAP

FORT DERA

1. **STATUS:**
   Confirmed off-post groundwater contamination

2. **TOTAL NUMBER OF RMIS SITES:** 18

3. **DIFFERENT SITE TYPES:**
   7 Tank Areas (10 underground, 2 above ground)
   4 Storage Areas
   2 Surface water
   1 Drilling Pit, referred to as Ice Well
   1 Fire Training Pit
   1 Landfill

4. **MOST WIDESPREAD CONTAMINANTS OF CONCERN:**
   Trichloroethylene
   Petroleum/Oil/Lubricants

5. **MEDIA OF CONCERN:**
   Groundwater
   Soil

6. **COMPLETED REM/IRA/RA:**
   UST removals (1992) (non-DERA funds).
   IRA - GWT System (1993-94) Projected Cost:$26,655.0K

7. **CURRENT IRP PHASE:**
   NFA at 7 sites
   RFI at 12 sites
   IRA at 2 sites

8. **PROJECTED IRP PHASE:**
   NFA at 8 sites
   CMS at 8 sites
   CA at 7 sites
   Long Term Monitoring at 1 site

9. **IDENTIFIED POSSIBLE REM/IRA/RA:**
   CA at 7 sites
   REMOVAL at one site - Pesticide contaminated soil

10. **FUNDING:**

Prior Year Funds	$ 6,599.5K
FY94 Funds	$ 1,780.0K
Future Requirements	$10,328.0K
Total	$18,707.5K

11. **DURATION:**

Year of IRP Inception	1991
Year of IRP Completion (excluding LTMing)	1997

INSTALLATION ACTION PLAN
FOR
FORT DERA

1. INSTALLATION INFORMATION

LOCALE

-- Fort Dera is located on 1,000 acres of land in New County, New Hampshire. Highway 10 forms the eastern boundary and the Connecticut River is located immediately west of the installation. Fort Dera is 1.5 miles north of the town of Badnews (population 10,500). Goodtimes, Vermont (population 3,100) is located 1.75 miles southwest of Fort Dera on the western side of the Connecticut River.

COMMAND ORGANIZATION

-- Major Command: U.S. Army Troop Command
-- Installation: Fort Dera, Environmental Office

INSTALLATION RESTORATION PROGRAM (IRP) EXECUTING AGENCY

-- Investigation Phase Executing Agency: U.S. Army Environmental Center, Installation Restoration Division, Branch A
-- Remedial Design/Action Phase Executing Agency: U.S. Army Corps of Engineers, Northeast Division

REGULATOR PARTICIPATION

-- Federal: U.S. Environmental Protection Agency, Region I, Emergency Response
-- State: New Hampshire Department of Environmental Services and Vermont Department of Environmental Conservation

REGULATORY STATUS

-- Non-NPL, potential off-post contamination
-- Technical Review Committee, Dec 91
-- RCRA Permit for solvent storage, Nov 92
-- Notice of Violations for UST, May 92
-- Interagency Agreement, None

SIGNIFICANT CHANGES TO IRP FROM THE PREVIOUS YEAR (FY93)

-- No further remedial action planned (NFA) approved by regulators at seven sites, Sep 93.
-- Interim ground water treatment system installed, Aug 93.
-- RCRA Permit for solvent storage issued, Nov 93.

2. INSTALLATION DESCRIPTION

Fort Dera is an active U.S. Army facility. Fort Dera is the Army's center of expertise in cold regions science and engineering. Fort Dera performs basic and applied research in snow, ice, and frozen ground and provides the U.S. Army with practical engineering research to develop equipment and procedures for application in cold regions.

The site is roughly rectangular in shape. Land use within 1/4 mile is primarily rural and residential, with zones of light industry, commercial/service, cropland/pasture, and mixed forest.

In 1960, the Army leased 492 acres of land from Trumpet College for the purpose of constructing a research facility. Prior to construction, the land was used primarily for agricultural purposes. Gravel was also mined on the western edge of the site. Fort Dera was officially established on 1 February 1961, combining the work of two predecessor organizations: the Snow, Ice, and Permafrost Research Establishment, which was formed on 27 August 1947; and the Arctic Construction and Frost Effects Laboratory, established on 25 February 1953. Fort Dera has been active since its inception.

The Army laid the cornerstone for its first building on 15 June 1960, and the Main Laboratory Building became fully operational in late 1963. Since then, Fort Dera has grown significantly with the addition of several new buildings. These include the Facilities Engineering building (1968), the Logistics and Supply building (1976), the Main Laboratory addition (1977), the Ice Engineering building (1978), the Frost Effects Research Facility (FERF,1985), and the Cradle and Crayon Child Development Center (1990). In 1972, 508 acres of additional land was purchased to accommodate the installation's expansion. This land is located along the western border of the original tract. This purchase expanded Fort Dera to its current size of 1000 acres.

The Army started investigating all potential areas of concern for any detrimental environmental impact, by implementing its environmental response authority under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)/Superfund Amendments and Reauthorization Act (SARA) in 1990. Continuation of the investigation, as of Nov 93, will occur under the Resource Conservation and Recovery Act (RCRA).

The installation was placed on the Federal Agency Hazardous Waste Compliance Docket in January 1992 due to the release of trichloroethylene (TCE) into the Connecticut River. A Technical Review Committee Charter was signed in December 1991 by the U.S. Environmental Protection Agency (EPA) Region I, New Hampshire Department of Environmental Services, Vermont Department of Environmental Conservation, town of Badnews, New Hampshire,

village of Goodtimes, Vermont, Trumpet College (the owner of 492 acres), and the U.S. Army.

In May 1992, Fort Dera received a notice of violation from the New Hampshire Department of the Environmental Services for the TCE and petroleum, oil, and lubricants (POL) contamination found at Fort Dera at above and underground storage tanks. All associated tanks have been removed. These removals were funded under the operations and maintenance account (OMA).

A RCRA Facility Assessment identified 18 solid waste management units (SWMUs). Eleven of the SWMUs required further investigation in the form of a RCRA Facility Investigation. The eleven sites are eligible for funding, since all sites were listed in the Resource Management Information System account prior to September 19, 1990. These sites correspond to the 11 sites identified for further investigation in the Remedial Investigation.

3. CONTAMINATION ASSESSMENT

A. ASSESSMENT OVERVIEW

Since 1960, a total of 30 underground storage tanks (USTs) have been installed at Fort Dera. The USTs have been used to store a variety of fuels and chemicals including No. 5 fuel oil, No. 2 fuel oil, gasoline, and TCE. To date, twenty-five of the USTs have been removed. The remaining USTs are used for No. 2 fuel oil storage and gasoline. In addition, various areas have been used for sanitary and construction debris landfill operations, open storage, fire training and vehicle maintenance. TCE is the primary contaminate of concern at Fort Dera.

TCE was the secondary refrigerant of the cooling system in Fort Dera's main laboratory from 1960 to 1987. TCE was also used as a degreaser. A Preliminary Assessment/Site Investigation (PA/SI), performed by Fort Dera and completed in 1991, indicated the presence of TCE in three of the four production wells tested. The production wells, which produce approximately 1 million gallons of water per day, are the source of cooling system water at the installation which is ultimately discharged into the Connecticut River. TCE was also detected in soil samples collected at two areas of concern, in two residential wells on the Vermont side of the Connecticut River, at the Fort Dera storm water discharge into the Connecticut River, and infrequently 100 feet downstream of the Fort Dera storm water discharge. This discharge constitutes a violation of Fort Dera's National Pollution Discharge Elimination System (NPDES) permit. RD of an interim and a permanent groundwater treatment system is underway to remove TCE from the water produced by the production wells.

In December 1991, Fort Dera initiated Operation Sweetwater to use Fort Dera's in-house capabilities to analyze the water supplies of any concerned residents in the site area. TCE was not detected in any other nearby drinking water supply wells. Fort Dera also provided bottled water to the two owners of the TCE-containing wells until the residents were connected to the municipal water supply system. An additional residential well in Vermont, during December 1992 sampling events, has shown TCE contamination after the first two houses were connected to the municipal water supply system.

In 1991, the U.S. Army Toxic and Hazardous Materials Agency (USATHAMA) initiated a Remedial Investigation (RI) to define sources of contamination. The RI Report was provided to the TRC members for review/comment and approved with minor revisions in 4QFY92. The RI examined the eighteen areas of concern that were identified by the PA/SI utilizing a soil gas survey. These areas are identified as FTDERA-001 through FTDERA-018 in the Restoration Management Information System (RMIS) and are discussed individually below. Following the soil gas survey only eleven sites were investigated further.

RI identified three sites as being the primary source of the TCE contamination in the ground water, FTDERA-001, FTDERA-002, and FTDERA-009. Due to the proximity of these areas, and their alignment with respect to the ground water flow patterns, these areas may create a single contamination plume beneath Fort Dera. Releases of petroleum-related contaminants (POL) have also occurred at several of the RMIS sites. Groundwater contamination has been detected at FTDERA-008 and FTDERA-013 and at a perched water table near FTDERA-015. The soils near FTDERA-015, FTDERA-016 and FTDERA-013 are contaminated with TCE, pesticides and POLs, respectively. Ground water contamination and soil contamination may also exist at FTDERA-013. Based on the results of and the issuance of the RCRA permit, the RCRA Facility Investigation (RFI) began in 1QFY93.

Table 1 lists all previous studies completed at FTDERA.

TABLE 1

PREVIOUS STUDIES AT FORT DERA

1. Fort Dera, June 1986, Fort Dera's First 25 Years, Internal Fort Dera Publication, Badnews, New Hampshire.

2. Fort Dera, 1990, Aerial Topographic Survey Plan, Schmidt Bors. Inc., Professional Surveyors, Framingham, Massachusetts.

3. Fort Dera, 26 April 1191, Site Investigation Report, Internal Fort Dera Publication, Badnews, New Hampshire.

4. Environmental XYZ, Inc. Work Plan, Field Sampling Plan, Health and Safety Plan and Quality Assurance Project Plan for Remedial Investigation, Fort Dera in Badnews, New Hampshire, Arlington, Virginia.

5. Environmental Photographic Interpretation Center (EPIC), September 1991, Site Analysis of the Fort Dera, U.S. EPA, Las Vegas, Nevada.

6. Faran, Karen J., undated, History of TCE Use and Handling at Fort Dera, Fort Dera Internal Report 1084, Badnews, New Hampshire.

7. Gatto, Lawrence W. and Sally A. Shoop, May 1991, Geology and Geohydrology at Fort Dera: A Preliminary Site Investigation, Fort Dera Internal Report 1088, Badnews, New Hampshire.

8. Marion, Dr. Giles, January 1991, The Fate and Treatment of Trichloroethylene (TCE) in Air, Water, and Soil: A Compilation of References and Abstracts, Fort Dera Internal Report 1081, Badnews, New Hampshire.

9. Northway Research Center, Inc. 10 December 1991, Final Report on the Findings of the Petrex Soil Gas Survey Performed at the U.S. Army Fort Dera in Badnews, New Hampshire, Farmington, Connecticut.

10. Perry, L.B., et. al., 1991, Fort Dera's Site Investigation and Analysis for Trichloroethylene, Fort Dera Internal Report, Badnews, New Hampshire.

11. Walthern Engineering Corporation, July 1991, Ground Water Investigation Goodtimes, Vermont, prepared for the Vermont Department of Environmental Conservation, Waterbury, Vermont.

12. Environmental XYZ, Inc. (E & E), October 1992, Final Remedial Investigation Report for Fort Dera, Badnews, New Hampshire, Arlington, Virginia.

B. SITE DESCRIPTIONS

Above Ground Storage Tanks (FTDERA-001):

FTDERA-001 is located adjacent to the main laboratory building on the northeast side. Two above-ground storage tanks (ASTs) are currently located in this area; a 15,000 gallon tank installed in 1989 containing fuel oil, and a 10,000 gallon tank installed in 1970 containing glycol and water. This area also contained a 10,000 gallon above ground TCE tank that exploded on 2 July 1970, resulting in the release of approximately 3,000 gallons of TCE.

Contaminant of Concern: TCE
Media of Concern: Ground water, soil
Completed IRP Phase to Date: PA/SI, RI
Current IRP Phase: RFI (1383# FTDE91S001)
Future IRP Phase: Corrective Measures Study (CMS) (1383# FTDE91S001), Corrective Action (CA) (1383# FTDE92S005)

Former TCE and Fuel Oil USTs (FTDERA-002):

FTDERA-002 is located adjacent to the main laboratory building at the northeast corner. This site is the location of former underground storage tanks (USTs). A 10,000 gallon tank containing TCE and a 12,000 gallon tank for fuel oil storage. The TCE tank was removed in 1972 and replaced by a 10,000 gallon fuel oil tank. The 10,000 gallon and 12,000 gallon fuel oil tanks were removed in 1989.

Contaminant of Concern: TCE, Petroleum, Oil and Lubricants (POL)
Media of Concern: Ground water, soil
Completed IRP Phase to Date: PA/SI, RI
Current IRP Phase: RFI (1383# FTDE91S001)
Future IRP Phase: CMS (1383# FTDE91S002)
CA (1383# FTDE92S008)

Former Fuel Oil UST (FTDERA-003):

FTDERA-003 is located on the eastern side of the Facilities Engineering building. This site is the location of the Facilities Engineering building former fuel oil tank, which was installed in 1968. In 1989, this UST failed tightness tests and was removed and replaced by an above ground storage tank using operation and maintenance account funds.

Contaminant of Concern: POL
Media of Concern: Ground water, soil
Completed IRP Phase to Date: PA/SI, RI
Current IRP Phase: NFA
Future IRP Phase: NFA

Current Fuel Oil UST (6,000 Gals, 1989) (FTDERA-004):

FTDERA-004 is located approximately 60 feet east of the southern corner of the Facilities Engineering building. This 6,000 gallon UST was installed in 1989 and is still in use. There is no known release from this tank.

Contaminant of Concern: POL
Media of Concern: Soil
Completed IRP Phase to Date: PA/SI, RI
Current IRP Phase: NFA
Future IRP Phase: NFA

Old Sanitary Landfill (FTDERA-005):

FTDERA-005 is located near the northeast corner of the installation. The 19 acre landfill was operated from 1962 until 1979 when wastes were contracted for disposal at a municipal landfill. The landfill area has been covered with clean fill.

Contaminant of Concern: unknowns mixed with non-hazardous debris
Media of Concern: Soil, Ground water
Completed IRP Phase to Date: PA/SI, RI
Current IRP Phase: RFI (1383# FTDE91S001)
Future IRP Phase: CMS (1383# FTDE91S001)
CA (1383# FTDE92S003)

Former Gasoline USTs (FTDERA-006):

FTDERA-006 is located approximately 60 feet northwest of the northern corner of the Facilities Engineering building. This is the location of two former USTs, each with 2,000 gallon capacity and used for gasoline storage. These tanks failed tightness tests and were removed in 1989.

Contaminant of Concern: POL
Media of Concern: Soil
Completed IRP Phase to Date: PA/SI, RI
Current IRP Phase: NFA
Future IRP Phase: NFA

Construction Debris Landfill (FTDERA-007):

FTDERA-006 is located approximately 600 feet northwest of the northern corner of the Facilities Engineering building. The site only contains construction debris, no evidence of contamination exists around the site. The site was operational until 1980.

Contaminant of Concern: Inert Material
Media of Concern: Soil
Completed IRP Phase to Date: PA/SI, RI
Current IRP Phase: NFA
Future IRP Phase: NFA

Fuel Dispensing Area (FTDERA-008):

FTDERA-008 is located along ATCO Road. The geographic area is approximately 2 miles long and several hundred feet wide. Each fuel dispensing area had three UST (which were replaced with conforming storage) with an average capacity of 25,000 gallons per tank. A variety of fuels have been stored, primarily gasoline. Free product has been found in a monitoring well. Accelerated remedial actions are needed to remove free product and to connect the well to the ground water treatment system.

Contaminant of Concern: POL
Media of Concern: Soil, Ground water
Completed IRP Phase to Date: PA/SI, RI, REM (tank removal)
Current IRP Phase: RFI (1383# FTDE91S001), RD/IRA (1383# FTDE91S004)
Future IRP Phase: CMS (1383# FTDE91S001) CA (1383# FTDE91S004)

Research Ice Well (FTDERA-009):

FTDERA-009 is located approximately 60 feet north of the western most side of the Main Laboratory building. This is the location of the ice well, a steel-cased 200 feet deep cylinder, in which TCE was used in refrigeration lines and drilling fluid mixtures. This area may also contain TCE-contaminated soils resulting from the 1970 explosion of the former TCE tank in site FTDERA-001. Another site located in close proximity, FTDERA-002, is also contributing to the TCE detected in a monitoring well. This is evident due to the fact that TCE detected within the ice well is only 25% of the concentration detected in the downgradient monitor well.

Contaminant of Concern: TCE, PCE, methylene chloride, and trimethylbenzene
Media of Concern: Ground water, soil
Completed IRP Phase to Date: PA/SI, RI
Current IRP Phase: RFI (1383# FTDE91S001)
Future IRP Phase: CMS (1383# FTDE91S001) CA (1383# FTDE92S005)

Current Permitted Storage Area (FTDERA-010):

FTDERA-010 is located at the corner of Well and House Road. This site adjacent to FTDERA-011. The current building is used for the storage of containerized hazardous wastes. The RI indicated no contamination in this area from past activities at FTDERA-011. The RI was initiated because the site was grandfathered into the IRP due to the inclusion into the RMIS program prior to Sep 90, however because it is an active site no further investigation will occur under the IRP.

Contaminant of Concern: Solvents, Metals
Media of Concern: Soil
Completed IRP Phase to Date: PA/SI, RI
Current IRP Phase: NFA
Future IRP Phase: NFA

Concrete Storage Pad (FTDERA-011):

FTDERA-011 is located in the northwest portion of the installation north of production well 1 and northeast of production well 5, along House Road. The concrete storage pad was built in 1974, and used for the storage of containerized wastes, including TCE. The Badnews town production well is located approximately 1000 feet north of the installation near FTDERA-011.

Contaminant of Concern: TCE, PCE
Media of Concern: Soil
Completed IRP Phase to Date: PA/SI, RI
Current IRP Phase: RFI (1383# FTDE91S001)
Future IRP Phase: Long Term Monitoring (LTM), (1383# FTDE92S002)

Exterior Test Pond (FTDERA-012):

FTDERA-012 is located in the northern corner of the installation. This is the location of exterior test pond. The exterior test pond is used for sea ice experimentation. This pond is fed by water from the Fort Dera storm sewer system and, as a result, may contain TCE. The site was grandfathered into the RMIS program, however because it is an active site no further investigation will occur under the IRP.

Contaminant of Concern: TCE
Media of Concern: Soil
Completed IRP Phase to Date: PA/SI, RI
Current IRP Phase: NFA
Future IRP Phase: NFA

Fire Training Area (FTDERA-013):

FTDERA-013 is located on the western side of the Logistics and Supply building. This is the location of the former gravel pad used for the disposal of spent TCE. One soil sample from the RI was contaminated slightly above the detection level, additional confirmatory sampling necessary, however this site will probably require no additional investigation.

Contaminant of Concern: TCE, Dichloroethylene (DCE), POL
Media of Concern: Ground water, Soil
Completed IRP Phase to Date: PA/SI, RI
Current IRP Phase: RFI (1383# FTDE91S001)
Future IRP Phase: To Be Determined, possible CMS (1383# FTDE91S001)

Salvage Yard (FTDERA-014):

FTDERA-014 is located northeast of the Main Laboratory building. It has been used for temporary storage of salvageable materials and for drum storage of spent solvents and waste oil. No contamination was found during the RI. Corrective Action under the RCRA Part B was not necessary.

Contaminant of Concern: Volatiles, metals, polychlorinated biphenyls (PCBs)
Media of Concern: Ground water, Soil
Completed IRP Phase to Date: PA/SI, RI
Current IRP Phase: NFA
Future IRP Phase: NFA

Former Greenhouse Fuel Oil UST (FTDERA-015):

FTDERA-015 is located adjacent to the western side of the Greenhouse building. This is the location of the former 2,000 gallon greenhouse UST, installed in 1973 and used to store fuel oil. This tank was removed in 1986 after leakage was observed. During installation of a RI soil boring at this site, free product was noted in perched ground water.

Contaminant of Concern: POL
Media of Concern: Ground water, soil
Completed IRP Phase to Date: PA/SI, RI
Current IRP Phase: RFI (1383# FTDE91S001)
Future IRP Phase: CMS (1383# FTDE91S001)
CA (1383# FTDE92S006)

Former Pesticide Storage Area (FTDERA-016):

FTDERA-016 is located between production wells 1 and 2. This site was used for the storage and mixing of pesticides and herbicides, until 1974. Documented spills have occurred inside and outside the building. The RI indicates that a small area of soil near the building is contaminated. Removal of contaminated soil will probably be required.

Contaminant of Concern: Pesticides
Media of Concern: Soil
Completed IRP Phase to Date: PA/SI, RI
Current IRP Phase: RFI (1383# FTDE91S001)
Future IRP Phase: Removal (1383# FTDE92S007)

Pond Near Well 3 (FTDERA-017):

FTDERA-017 is located in the southwestern corner of the installation. This site was used for containment of artificial sea water after discharge from the laboratory buildings. Based on the RI, small amounts of solvents may have been released with the sea water, however the concentration is below the RCRA corrective action levels.

Contaminant of Concern: TCE
Media of Concern: Ground water, Soil
Completed IRP Phase to Date: PA/SI, RI
Current IRP Phase: RFI (1383# FTDE91S001)
Future IRP Phase: NFA

Cooling Water Discharge to Conn. River (FTDERA-018):

FTDERA-018 is located west of FTDERA-012 adjacent to the Connecticut River. The industrial cooling water system pumps contaminated groundwater into system then empties to the storm water discharge.

Contaminant of Concern: TCE
Media of Concern: Ground water, Surface water
Completed IRP Phase to Date: PA/SI, RI, RA (bottled water)
Current IRP Phase: RFI (1383# FTDE91S001), IRA (1383# FTDE92S002)
Future IRP Phase: CMS (1383# FTDE91S001) RD/CA (1383# FTDE92S002)

This IRA and RA will serve two functions. It will allow Fort Dera to gain compliance with their NPDES permit and it will serve to remediate the groundwater beneath Fort Dera. Groundwater flows toward the production wells from FTDERA-001, FTDERA-002, and FTDERA-009 which are the most likely sources of groundwater contamination. Therefore, the groundwater treatment facility will remediate groundwater from these sites as well. The interim groundwater treatment system shall be on line 2QFY93 and the permanent system shall be in operation 3QFY94.

4. IRP SITE SUMMARY CHART

FORT DERA

RMIS SITE NUMBER	CHEMICAL OF CONCERN	PHASE OF INVESTIGATION			COMPLETED IRA/RA
		COMPLETED	CURRENT	FUTURE	
FTDERA-001	TCE	RI	RFI	FS,RD/CA	None
FTDERA-002	TCE	RI	RFI	FS,RD/CA	None
FTDERA-003	POL	RI	NFA	NFA	None
FTDERA-004	POL	RI	NFA	NFA	None
FTDERA-005	UNKNOWN,INERT MATL	RI	RFI	NFA	None
FTDERA-006	POL	RI	NFA	NFA	None
FTDERA-007	INERT MAT'L	RI	NFA	NFA	None
FTDERA-008	POL	RI	RFI	NFA	None
FTDERA-009	TCE, POL	RI	RFI	FS,LTM,CA	None
FTDERA-010	SOLVENTS,METALS	RI	NFA	NFA	None
FTDERA-011	TCE	RI	RFI	LTM	None
FTDERA-012	TCE	RI	RFI	LTM	None
FTDERA-013	TCE, POL	RI	RFI	FS	None
FTDERA-014	TCE,PCB,METALS	RI	NFA	NFA	None
FTDERA-015	POL	RI	RFI	FS,RD/CA	None
FTDERA-016	PESTICIDES	RI	RFI	REMOVAL	None
FTDERA-017	TCE	RI	RFI	NFA	None
FTDERA-018	TCE	RI	RFI	FS,RD/CA	Interim GWT System
		RD	IRA,LTM		

5. SCHEDULE

For a schedule of IRP work completed to date and planned for the next few years at FTDERA, see below.

A. PAST PHASE COMPLETION MILESTONES:

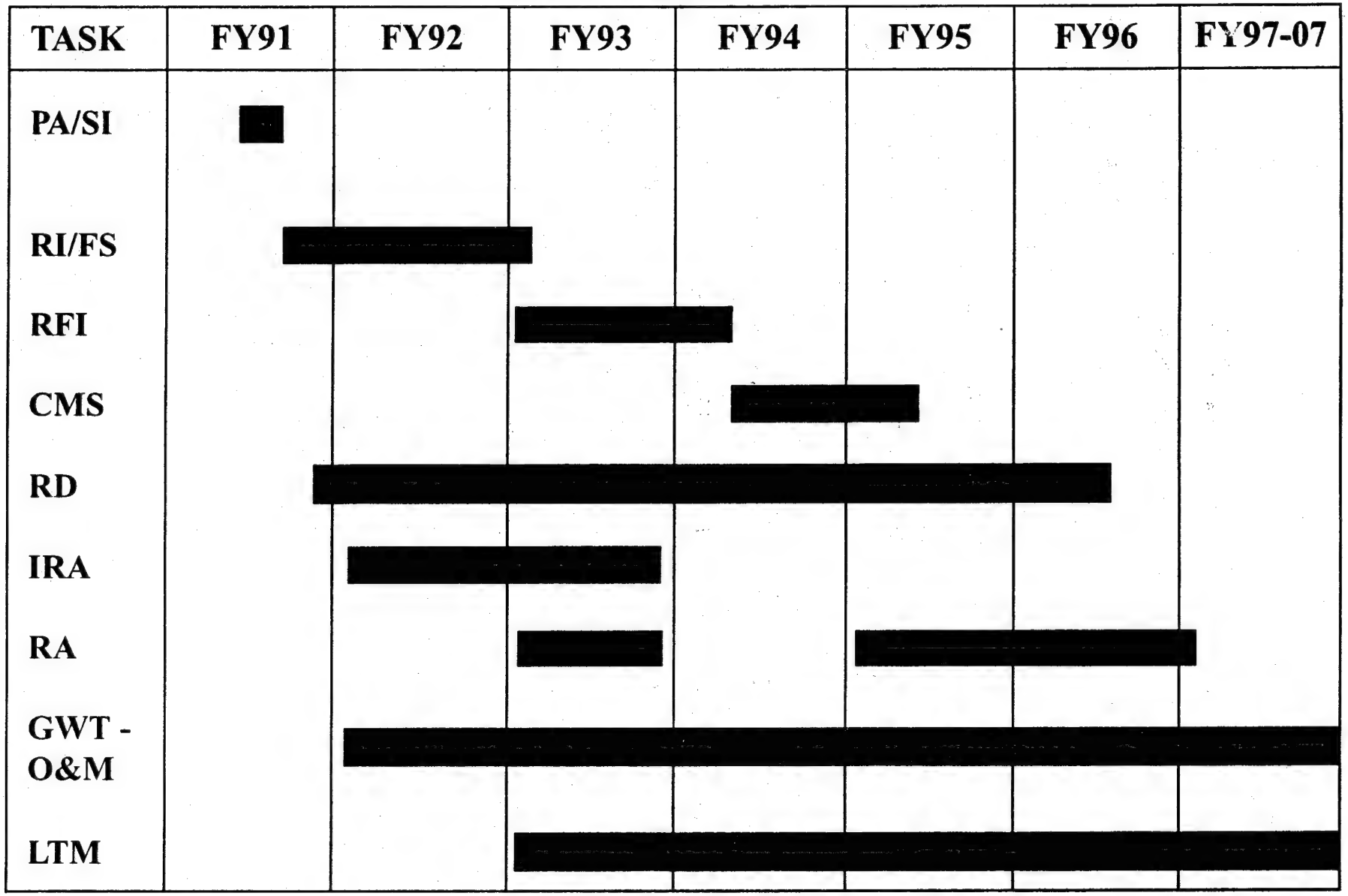
IRP Phase	Completion Date
IRP PA Initiation	Sep 90
PA/SI, Installation	Jun 91
RI (FTDERA-001 - FTDERA-018)	Dec 92
RFI Award (11 Sites) (FTDERA-001, 002, 005, 008, 011 - 013, 015 - 018)	Dec 92
IRA Decision Document	Jul 92
Final GWT Decision Document	Jul 92
Interim Groundwater Treatment System Design (FTDERA-018)	Sep 92
Interim Groundwater Treatment System On-line (FTDERA-018)	Feb 93
Permanent Groundwater Treatment System Design (FTDERA-018)	Dec 92

B. PROJECTED PHASE COMPLETION MILESTONES:

IRP Phase	Completion Date
RFI (FTDERA-001, 002, 011 - 013, 015 and 018)	Mar 94
Permanent Groundwater Treatment System On-Line	Mar 94
Corrective Measures Study	Mar 95
Proposed Plan	Aug 95
Record of Decision	Dec 95
Remedial Design - Soils	Jul 96
Remedial Action - Soils	Jul 97
Long Term Monitoring (LTM)	Dec 07

Projected completion date of IRP excluding LTM: Jul 97

FORT DERA
IRP SCHEDULE



6. REMOVAL/INTERIM REMEDIAL/REMEDIAL ACTION ASSESSMENT

Phase I investigated 18 sites, FTDERA-001 through FTDERA-018. No further remedial action is planned at seven sites. Eleven sites require additional investigation. One site, FTDERA-018 is undergoing remedial action and two sites, FTDERA-008 and FTDERA-016 are potential sites for accelerated action.

Past REM/IRA/RA/LTM:

* FTDERA-018, Cooling Water Discharge to Connecticut River, Interim Groundwater Treatment System, installed Aug 93, $411.0K

Current REM/IRA/LTM:

* FTDERA-018, Cooling Water Discharge to Connecticut River, Long Term Monitoring, average $179.0K per year.

Potential Accelerated Actions:

* FTDERA-008, Fuel Dispensing Area, Free product removal from existing monitoring wells, temporary connection to existing interim GWT system. FY93, $258K

* FTDERA-016, Former Pesticide Storage Area, Removal of 250 square foot area of soils, approximately 3 feet deep and disposal, FY93, $550K

Future REM/IRA/LTM Possible Opportunities:

* FTDERA-018, Cooling Water Discharge to Connecticut River, Installation of permanent groundwater treatment system, FY93-FY94, $2,250K
* FTDERA-002, Former TCE and Fuel Oil USTs, Soil Treatment, FY94, $550
* FTDERA-008, Fuel Dispensing Area, Soil treatment and permanent connection to ground water treatment system, FY94, $2,208K
* FTDERA-009, Research Ice Well and FTDERA-001, Above Ground Storage Tanks: Soil treatment and treatment of ice well contents, ground water treatment, FY 94, $430K
* FTDERA-015, Former Greenhouse Fuel Oil UST: Localized groundwater remediation could also be required due to the free petroleum product in the perched water zone, FY 94, $230K
* FTDERA-005, Old Sanitary Landfill: Cap old landfill, install monitoring wells. FY 94-FY95, $2,000

7. CONCURRENCE

BOB B. GOOD (INSTALLATION COMMANDER SIGNATURE)
Colonel, CM
Commanding

BOB RESTORATION (MACOM CONCURRENCE)
Chief
Environmental Office
U.S. Army Troop Command

ATTACHMENT

COST ESTIMATES

An estimate of past, present, and projected funding has been broken down by fiscal year and phase is listed below.

PRIOR YEAR FUNDS:

FY91	Preliminary Assessment/Site Inspection	$222.0K
	Remedial Investigation	490.0K
	Remedial Design (GWT; FTDERA-018)	288.0K
FY92	RCRA Facility Investigation (FTDE91S001)	$1,400.0K
	Interim Remedial Design (GWT)	51.0K
	IRA (GWT; FTDERA-018)	360.0K
	Permanent Remedial Action (GWT)	2,250.0K
	Groundwater Treatment O&M (FTDE-018)	100.0K
	RD/RA S&A	126.0K
FY93	Monitoring (FTDE91S002)	$ 210.0K
	IRA (GWT; FTDERA-008; FTDE91S004)	258.0K
	Groundwater Treatment O&M (FTDE91S002)	115.0K
	RD/CA (Removal, FTDERA-016; FTDE92S007)	550.0K
	RD (GWT, FTDERA-009; FTDE92S005)	30.0K
	RD (Soil treatment; FTDERA-008; FTDE91S004)	150.0K
	Total	$6,599.5K

CURRENT YEAR FUNDS (FY94):

FY94	Monitoring (FTDE91S002)	$ 100.0K
	Groundwater Treatment O&M (FTDE91S002)	120.0K
	Corrective Measures Study (FTDE91S002)	1,560.0K
	(all projects funded) Total	$1,780.0K

FUNDS REQUIRED BY FISCAL YEAR TO COMPLETION:

FY95	Monitoring (FTDE91S002)	100.0K
	Groundwater Treatment O&M (FTDE91S002)	120.0K
	RD (Cap; FTDERA-005, FTDE92S003)	200.0K
	RD (GWT, FTDERA-015; FTDE92S006)	30.0K
	RA (Soil Treatment; FTDERA-008; FTDE91S004)	2,058.0K
	REM (GWT; FTDERA-009; FTDE92S005)	300.0K
	RA (GWT; FTDERA-009; FTDE92S005)	100.0K
FY96	Monitoring (FTDE91S002)	100.0K
	Groundwater Treatment O&M (FTDE91S002)	130.0K
	RA (GWT/Soil Treatment; FTDERA-006; FTDE92S006)	300.0K
	RD/RA (Soil Treatment; FTDERA-002, FTDE92S008)	550.0K
	RA (Cap; FTDERA-005, FTDE92S003)	2,000.0K
FY97-FY 07	Monitoring (FTDE91S002)	2,420.0K
	Groundwater Treatment O&M (FTDE91S002)	1,920.0K
	Total Outyear Requirements	$10,328.0K

Total Funding from Inception to Completion **$18,707.5K**

FORT DERA - FUNDING PROFILE

(in thousands)

TASK	FY91	FY92	FY93	FY94	FY95	FY96	97-07	TOTAL
PA/SI	222							222
RI/FS	490	1400						1890
CMS				1560				1560
RD	288	51	230		230	50		849
IRA		360	758					1118
RA		2376			2458	2800		7634
GWT O&M		100	115	120	120	130	1920	2505
LTM			210	100	100	100	2420	2930
TOTAL	1000	4287	1313	1780	2908	3080	4340	18708

Note: This example is a compilation of sites from many installations, not an actual installation.

TO BE FURNISHED UNDER SEPARATE COVER
WHEN FINALIZED

INFORMATION PAPER

SFIM-AEC-BCB
29 September 1993

SUBJECT: Environmental Documentation for Property Transfer and Lease

1. **REFERENCES:**

a. AR 200-1, Environmental Protection and Enhancement (Chapter 12, paragraph 12-5, Real Property Transactions, and Appendix B, Environmental Baseline Study (EBS) Protocol), 23 April 1990.

b. AR 200-2, Environmental Effects of Army Actions; (Chapter 2, National Environmental Policy Act (NEPA) and the Decision Process; Chapter 3, Required Records and Documents; Chapter 4, Categorical Exclusions; Chapter 5, Environmental Assessment (EA); Chapter 6, Environmental Impact Statement (EIS), 23 December 1988.

c. AR 405-10, Acquisition of Real Property and Interests Therein, July 1974.

d. AR 405-80, Granting Use of Real Estate, February 1979.

e. AR 405-90, Disposal of Real Estate (Chapter 2, Property to be Excessed; Chapter 6, DA Disposal of Real Property, Appendix D, Decontamination of Real Property (SOCS)), 10 May 1985.

f. Public Law 102-425, The Community Environmental Response Facilitation Act, 19 October 1992.

g. Federal Register, 40 CFR Part 373, U.S. Environmental Protection Agency, Reporting Hazardous Substance Activity When Selling or Transferring Federal Real Property; Final Rule, 16 April 1990.

h. BRAC Cleanup Plan (BCP) Guidebook, Department of Defense, Fall 1993.

i. Memorandum, The Deputy Secretary of Defense, 9 September 1993, subject: Disposal of Real Property at Closing and Realigning Bases.

j. Memorandum, Office of the Assistant Secretary of Defense, 18 June 1992, subject: Amended Initial Guidance for Environmental Reviews for Parceling.

k. Memorandum, USATHAMA, CETHA-BC-B, 28 April 1992, subject: Statements of Condition (SOC).

l. Memorandum, AMC, AMCEN-R, 2 April 1991, subject: Preliminary Assessment Screenings (PAS).

m. Memorandum, HQDA(ENVR-EH), 12 March 1991, subject: Preliminary Assessment Screenings (PAS).

n. Memorandum, HQDA(ENVR-EH), 25 February 1991, subject: Preliminary Assessment Screening (PAS) Training.

o. Memorandum, HQDA(ENVR-EH), 1 November 1990, subject: Real Property Transactions and Preliminary Assessment Screenings (PAS).

2. **BACKGROUND:**

a. Although Army regulations have long provided for the sale and transfer of excess Army property, it was not until the passage of Public Law 100-526, the Base Realignment and Closure (BRAC) Act of 1988, that transfer of Army property became an Army priority. With the passage of subsequent BRAC laws and the Community Environmental Response Facilitation Act (CERFA) in October 1992, the Department of Defense (DOD) and Department of the Army have placed more and more emphasis on the expeditious identification, cleanup, and transfer or lease of excess federal property.

b. Under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), and reference 1g, the Army remains liable for environmental cleanup on real property it transfers, even when the contamination was discovered subsequent to transfer. To protect itself from disagreements as to the source of contamination subsequently discovered, the Army has established protocols to assess the condition of property prior to transfer.

c. Guidance from the DOD, and the passage of the CERFA have required changes in Army protocols for property transfer. Protocols to effect lease of Army property have similarly been revised. However, the DOD guidance on property transfer and lease continues to evolve. As such, the information contained in this paper is current at the time of publication, but additional changes which affect BRAC requirements for property transfer and lease may occur and, in fact, may be likely. References 1h, 1i, and 1j are the most current guidance.

3. **REQUIREMENTS UNDER BRAC:** The following is a discussion of the environmental documentation necessary to transfer or lease

excess Army property. The signature authority for these documents is presented in paragraph 4 below, based on current guidance in references 1e and 1h:

a. **Property Transfer:**

(1) The first step to transfer excess Army property is to prepare an **Environmental Baseline Survey (EBS)** (reference 1a). The EBS is a DOD term which, although contained in the current AR 200-1, was changed to **Preliminary Assessment Screening (PAS)** by references 1l, 1m, 1n, and 1o. The PAS is different from the former EBS in that it is more simple to prepare. In the past, the U.S. Army Environmental Center (USAEC), Base Closure Division, has prepared PAS documents in-house (Fort Dix and Hamilton Army Airfield); at least one PAS was prepared by a contractor (Fort Devens). The EBS/PAS becomes part of whatever National Environmental Policy Act (NEPA) documentation that may be necessary, as discussed later. Copies of PAS documents are available.

However, Army Regulation 200-1 is currently under revision, and draft copies of the regulation indicate that the Army will return to using the term EBS. It is the understanding of this Center that the EBS protocols, outlined in the revised AR 200-1, will reflect current DOD guidance for the EBS. In any event, the requirement to establish the environmental baseline of real property proposed for excessing at Army installations remains firm (as indicated by references 1h and 1i).

With the passage of CERFA, DOD issued new guidance on the format and protocol for the EBS (reflected in references 1h and 1j). The new guidance requires the EBS protocol to consider several requirements new to CERFA, to include property transfer and title documents' review, and adjacent property inspections. The Army is in the process of revising its EBS guidance, as indicated above. In the interim, the DOD protocol for the EBS should be followed.

It is important to note that the DOD protocols for the EBS and for the CERFA Report are the same. Therefore, the CERFA Report fulfills the requirements of the EBS, and serves as one of the required property transfer (or lease) documents. Current DOD guidance in reference 1h requires that regulators be notified at the initiation of an EBS.

(2) Once the baseline condition of an installation or parcel proposed for transfer is known, the required property

transfer documentation depends on the environmental condition of the property. The transfer of uncontaminated or "clean" property and contaminated but remediated property follow different tracks and requires different transfer documents as follows:

(a) **Transfer of Uncontaminated Property**: The transfer of uncontaminated property by deed to a third party outside the federal government requires the completion of a **Finding of Suitability to Transfer (FOST).** The FOST (references 1h and 1j) summarizes the results of the EBS. Current DOD guidance (references 1h and 1j) requires that regulators be notified of the intent to sign a FOST, not later than 30 days prior to property transfer.

It is unclear, however, if the regulatory community is expected to concur, or can prevent the transfer of Army excess property. Reference 1j states that "After consideration of all relevant comments... and signing of the FOST, the military departments will include the signed FOST in the administrative record and **may proceed to convey the property by deed"** (emphasis added). Reference 1j states that unresolved comments are to be included as an appendix to the FOST. The USAEC, Base Closure Division, has prepared the first Army FOST under the BRAC Program.

A question exists as to whether property which contains lead-based paint, asbestos, unexploded ordnance, or transformers laden with polychlorinated-biphenyls (PCB) can be transferred using the FOST. These substances are safety, rather than environmental issues. The conditions allowing the use of a FOST appear to be met; neither hazardous substance (as defined by CERCLA) storage for one year or more, nor any release or disposal has occurred. Therefore, as long as the lead-based paint, asbestos, unexploded ordnance, or PCB transformers do not pose a health threat but are merely present on the property, the parcel is not "contaminated" and a FOST appears to be the appropriate transfer document.

(b) **Transfer of Contaminated Property**: The transfer of contaminated property by deed to a third party outside the federal government requires the completion of a **Statement of Condition (SOC)** (there is currently no DOD guidance which provides for a FOST for contaminated property transfers; however, the Air Force does have such a FOST transfer vehicle).

Formerly known as the Statement of Clearance, the requirements and protocols for the Statement of Condition are found in references 1e and 1k. In accordance with reference 1e,

the USAEC prepares and signs all SOCS issued by the Army. The SOC details the extent of contamination at a parcel, the subsequent efforts to remediate that contamination, and states that the parcel is in a reusable condition.

Prior to CERFA (reference 1f), CERCLA required that all remediation be completed before a parcel could be transferred. This was amended by CERFA, which allows for the transfer of contaminated property "if the construction and installation of an approved remedial design has been completed, and the remedy has been demonstrated to the Administrator to be operating properly and successfully." (reference f, Section 4). Presumably, this means that the Army can transfer contaminated property for which a remedial action is in place, is viable, but not yet complete. However, neither DOD nor the Army has issued written guidance to address this situation to date.

(3) In conjunction with the preparation of the EBS, and either the FOST or SOC, references 1a, 1b, 1e, and 1h require further environmental documentation before transfer can occur. Under NEPA, either an **Environmental Assessment (EA)** or **Environmental Impact Statement (EIS)** is required to assess the broad impacts of the proposed transfer. Both the EA and EIS can (and should) be started prior to the EBS. These documents are typically contracted for at the Army installation level.

The transfer of discrete parcels at Army installations has often led, after the completion of the EA, to a **Finding of No Significant Impact**, or **FONSI**. If the EA/FONSI or EIS indicate that the proposed transfer can occur, then transfer can be effected, assuming that the EA/EIS has considered other issues including historic preservation, cultural resources, etc.

b. **Property Lease:**

(1) To lease Army property to a third party or a Federal agency, the EBS protocol outlined above must be followed. Reference 1h provides additional guidance on the lease process. Because the Army retains ownership of the property, however, the environmental documentation required to effect the lease of property is reduced. Significant cost savings can be realized by performing lease EBS documentation "in-house" (e.g., at the installation level, USAEC, etc.).

(2) Following the completion of the EBS, AR 200-2 (reference 1b) allows the completion of the **Record of Environmental Consideration (REC)** in some cases. The purpose of the REC (Chapter 3, reference 1b) is to streamline the lease

process when the proposed action is exempt from NEPA or has been adequately assessed in existing documents and determined not to be environmentally significant (reference 1b).

Certain actions are excluded from the NEPA requirements; these categorical exclusions (CX) are found in Appendix A of reference 1b. In general, grants of leases, licenses, and permits to use Army property for or by another government or a non-government entity are excluded from the requirements of NEPA; however, a REC is required. RECs are typically not prepared for property transfer, as the more detailed EA/EIS is usually required to assess the impacts of the transfer.

The installation normally prepares the REC. At this writing, neither recent DOD nor Army guidance has affected the requirements to complete a REC as outlined in AR 200-2.

(3) After completion of the lease EBS and the REC, a **Finding of Suitability to Lease (FOSL)** is prepared (references 1h and 1j). The FOSL, like the FOST, is not a stand-alone document. Rather, it is based on the EBS process and serves to summarize the suitability of the property proposed for lease. The DOD has issued guidance (references 1h and 1j) which allows the lease of Army property under three conditions summarized below:

(a) The property is uncontaminated and has not been used to store hazardous substances or petroleum products for one year or more, or suffered a release[1] of one of these substances.

(b) The property was contaminated, but the contamination was cleaned up, or storage occurred for more than one year but no release occurred.

(c) The property contains some level of contamination, however, the property may be used pursuant to the proposed lease, with use restrictions specified in the lease, with acceptable risk to human health or the environment.

[1]"Release" as it is used here and in reference i pertains to "any hazardous substance or any petroleum product." While USAEC believes it is consistent with CERCLA to assess "release" in terms of a reportable quantity, DOD has, to date, rejected the "reportable quantity" trigger.

DOD guidance requires that regulatory agencies be notified at the initiation of the EBS and FOSL.

4. **SIGNATURE AUTHORITY:** Guidance on the signature authority for the documents outlined above is evolving. Currently, reference 1h provides for the Base Realignment and Closure Environmental Coordinator (BEC) to be the signature authority for the following property transfer and lease documents discussed herein:

a. The Environmental Baseline Survey (EBS).

b. The uncontaminated parcels determination under CERFA.

According to reference 1h, the BEC does not sign but provides input to FOSTs and FOSLs. Currently, reference 1j provides for the FOST to be signed by the Deputy Assistant Secretary of the Army (DASA); presumably the DASA will also sign the FOSL.

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